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BIBLIOGRAPHY OF THE CAT

National Environmental Research Center

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Report is a bibliography of the domestic cat and contains almost 1500 citations, a majority of which are annotated. The citations are indexed according to the content of the source.

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BIBLIOGRAPHY OF THE CAT

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Experimental Biology Laboratory
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Program Element No. 1H1095

ENVIRONMENTAL PROTECTION AGENCY
National Environmental Research Center
Research Triangle Park, North Carolina 27711

February 1974

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BIBLIOGRAPHY OF THE CAT

INTRODUCTION

When the Feline Colony of the Experimental Biology Laboratory was first begun in 1962, the investigators associated with that project rapidly acknowledged the difficulties in assembling published material about the domestic cat, especially scientific articles containing data and information about reproduction, development, growth, normal physiological values, and the art of husbandry. Since that time, these investigators have been collecting reference sources pertinent to the cat, mostly of a scientific and partly of a clinical character. Over the years a number of systems of storage and retrieval of pertinent references had been used; as the file grew, the need for a more sophisticated system became apparent. In 1970, efforts were initiated to code the references (with an abstract, if available) into a computerized system. A group of "Content Characteristics" was developed for use in the description of the content of each citation. One or more, and as many as 10 or 15 characteristics, were assigned to each citation, the number of such characteristics being dependent upon the compiler's attitude towards the content of the article and the state of the material (i.e., depth of the work involved, and availability of the entire article, short abstract, or title alone).

It is estimated that more than 7,000 references are now on file, most of which are in the form of a full reprint or copy. Only 1,570 references

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are represented in this publication (on some 16,000 IBM cards). Most of the publication dates are concentrated in more modern years (later than 1960), but a considerable number extend back into the mid-1800's.

Two individuals were instrumental in developing the necessary computer programs for entry and retrieval. Stu Carlowe, of the Food and Drug Administration in Rockville, Maryland, not only developed the input systems, but also encouraged us to continue with the rather formidable and time-consuming experience of key-punching thousands of cards. Ted Harris, of the National Environmental Research Center at the Research Triangle Park, North Carolina, developed the retrieval program and designed the format of the final printout. We are grateful for their patient cooperation.

This bibliography is an attempt to fill a void in the available literature which refers to the cat in its role as a laboratory animal. Plans have been made to continue to expand the number of citations and to update the bibliography on a periodic basis. The expense entailed in enlarging and publishing this bibliography is prohibitive unless there is a sufficiently large need. To determine the readers' interest in the continuation, enlargement, and improvement of this publication, it is requested that they contact the editor with their opinions.

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INSTRUCTIONS

As each citation (be it book, article, abstract, or title only) was read and entered into this bibliography, the compiler described the citation with one or more "Content Characteristics". The list of such characteristics and the number of citations associated with each are shown below in the form used by the compiler. The form was developed to allow inclusion of all citations containing related subject matter under a number of headings; a computer determined the cross-reference selection.

For this edition of the bibliography, a subject index without cross-referencing is used.

Each citation is listed by its accession number under all the content characteristics which were assigned to it by the compiler of the citation. The users of the bibliography need only to look up the particular characteristics which are of interest, compare the accession numbers under that heading with those under other headings of interest, and find those common numbers on the bibliography (which is arranged in ascending order).

Two last points may be of interest. Some accession numbers are not included in this file because they have not yet been assigned. Also, about 170 citations are included that have no direct relationship to cats.

The editor would appreciate being advised of any errors in the bibliographic text, and of any suggestions that the user may think helpful for its improvement.

CONTENT CHARACTERISTICS

(including the number of references under each heading)

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Herbivores	31
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Insects	4
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Animals, general	74

by ENVIRONMENTAL SITUATION (399)

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Colonies, commercial	17
Pets	128
Herds	5
Feral	9
Random-source	80
Zoos	11
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by DEVELOPMENTAL STAGE (697)

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Nose	8
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Spleen	36
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Brain	175
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Autonomic nervous system	59
Muscle	20
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Tendons, ligaments	20
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Pineal	0
Thyroid	7
Parathroid	3
Ovarian	11
Testicular	5
Neurosecretory	2
Digestive-secretory	1
Pancreatic	5
Adrenal	5
Endocrines, other	2

CAT BIBLIOGRAPHY

NUMBER 00001
Burgen, A.S.V.
The Osmotic Work of Salivary Secretion in the Dog.
J.Cell Comp.Physiol. 45:465-477,1955.
The freezing point depression of dog parotid saliva was studied. The osmolyte concentration of saliva increases with the rate of secretion from 82 (+/- 8.1) milliosmols at lowest rates of secretion upto 232 (+/- 10.8) milliosmols at the maximal rate. The osmotic work of secretion reached a high of 13.2 (+/- 2.7) millicals/gm/min at about half maximal secretory rates and declined with further increase in rate of secretion to 6.4 (+/- 1.7) millicals/gm/min at the maximal rate. It is therefor unlikely that the rise in osmolyte concentration in the saliva with increasing rates of flow is due to saturation of the gland's capacity for osmotic work. The role of osmotic back absorption of water in the ducts is discussed.

NUMBER 00002
Norman, A.
Sasaki, M.S.
Ottoman, R.E.
Fingerhut, A.G.
Lymphocyte Lifetime in Women.
Science 147:745,1965.
The lifetime of the lymphocyte in hematologically normal women is 530 (+/- 64) days. This estimate, made from studies on 25 women who had received radiation therapy for cervical carcinoma, is based on the rate of disappearance of lymphocytes with acentric chromosome fragments.

NUMBER 00003
Davies, W.L.
The Chemistry of Milk, Chap.1, page 7,1939.
Includes a comprehensive table of milk composition from various species, in % values. The 4 analyses of cat milks are: water=81.63, fat=3.00 to 4.98, sugar=4.71 to 4.91, casein=3.12 to 3.79, other proteins=3.11 to 5.96, and ash=0.58.

NUMBER 00004
Kraintz, L.
A Comparison of the Calcium Concentration of Submaxillary Salivary Glands.
Nature 209(5019):215-216,1966.
The calcium concentration of submaxillary glands is markedly different in species examined and is related to the sialic acid content of the mucoid present. Calcium

concentration of submaxillary salivary glands of 3 male cats, expressed as mg of total calcium/100 gm of wet weight of tissue, is 63.8 (S.E. of mean=4.8).

NUMBER 00005
Brinker, W.O.
Jenkins, T.W.
Amputation of the Foreleg in Small Animals.
J.A.V.M.A. 130(3):126-129,1957.
Excellent step-by-step description of a modification of the Frick method of amputation of the foreleg, from the shoulder joint distally. Includes 7 drawings.

NUMBER 00006
Small, E.
Nervous Syndrome in Cats: Questions and Answers.
Mod.Vet.Pract. 46(1):68,1965.
A short clinical discussion of circling and incoordination in adult cats. The main cause is put at middle ear infection or anti-freeze toxicity.

NUMBER 00007
Blakemore, J.C.
Cause of Sudden Death in Kittens.
Mod.Vet.Practice 46(1):70,1965.
A short discussion of possible causes of death of two litters of kittens from a seemingly good cattery enviroment. Possible causes discussed were enteritis, chlorinated hydrocarbons, and panleukopenia.

NUMBER 00008
Ferm, V.H.
Teratogenic Effects of Hyperbaric Oxygen.
Proc.Soc.Exptl.Biol. 116(4):975-976,1964.
Fetal malformations in hamsters, including harelip, spina bifida and hypoplasia of the lower extremity, occurred after pregnant females were subjected to increased oxygen tension under increased pressure. It is not known whether the oxygen or pressure or both are responsible for the effects. Exposure periods were two and three hours.

NUMBER 00009
Ott, R.L.
Feline Exudative Pleuritis.
Mod.Vet.Practice 46(3):53-54,1965.
A short but thorough description of feline exudative pleuritis of bacterial origin. Cat and mink are ten times more susceptible to this condition than the dog. Early and often
overlooked symptoms are dry pleuritis, temperature of 104 to 105, crouched position with abducted elbows and

abdominal breathing. As exudate forms, temperature falls to 102.5 or 103 F and WBC increases. Although the lungs may become quite compressed the cat can adapt quite remarkably to decreased pulmonary function. The author continues with diagnostic and therapeutic measures.

NUMBER 00010
Lombard, C.
Tongue Cancer in Cats.
Bull.Acad.Vet. 37(4):164-166,1964.

NUMBER 00011
Gregor, W.W.
Salicylamide as a Taeniacide.
Vet.Rec. 75(51):1421-1422,1963.

NUMBER 00012
Mintschev, P.
Suppression of Estrus in Cats.
Zuchtyg.Fortpflstorung u.Besamung 7:120-126,1963.

Two daily oral doses of 2-3 drops of a 1% solution of pilocarpine HCl suppressed estrus in cats within 2 days. About half of the cats had the next cycle at the normal time. The remainder missed one or more and about 13% had no further cycles. In male cats treatment suppressed libido. In bitches given 3-4 drops twice a day, estrus ceased on the second day.

NUMBER 00013
Gershoff, S.N.
Gottleib, L.S.
Pantothenic Acid Deficiency in Cats.
J.Nutrition 82(1):135-138,1964.

A dietary source of pantothenic acid is essential for proper growth. In a cat the minimum amount of calcium pantothenate required to meet this need is 5 mg/kg of diet. Of 28 mixed-breed kittens, 3 months old, fed purified diets containing varying amounts of Ca-pantothenate (0.1, 3, 5, 10 or 20 mg/kg of diet), 8 which received none exhibited terminal stages of acute deficiency after 2-4.5 months on the ration. All of 4 receiving 1 mg Ca-pantothenate/kg died after being fed the ration for 3.5-4.5 months; 3 of 4 receiving 3 mg/kg died after 6 months and the 4th died at 9.5 months. Levels of 5 mg/kg and higher are adequate to support good growth and health. The clinical picture of pantothenic acid deficiency was characterized by emaciation. Following an initial growth response, cats receiving 0.3 mg Ca-pantothenate/kg started to lose weight after 2-3 months, while the weights of cats in the other groups continued to increase. As indicated by urinary excretion, when the Ca-pantothenate content of the diet increased from 3 to 5 mg/kg there was a sharp increase in acetylation of p-amino-benzoic acid from 20 to 37% (40% at the 20 mg/kg level) and also a sharp increase in the urinary ratio of pantothenic acid to creatinine. At necropsy, lesions attributable to pantothenic acid deficiency were observed in cats receiving 0.3 mg/kg, with the livers and intestinal tracts being the most prominently affected. Many of these animals also had bronchopneumonia. It appears that Ca-pantothenate at a level of 5 mg/kg of diet is the minimum amount required to support normal growth and maintain good health in the cat.

NUMBER 00014
Schafer, W.J.
Bleeding Gastric Ulcers in the Cat.
Vet.Med./Small Anim.Clin. 59(5):461 & 463,1964.

A 6-year old cat was submitted with symptoms of anorexia and depression. Fetid, black tarry feces had been observed. Clinical examination revealed severe anemia. Temperature was normal. Fecal exam was positive for hookworms. Tentative diagnosis included intestinal parasitism, hemobatonellosis or leukemia. Initial treatment consisted of injectable iron, b-vitamins and vermifuge. Daily follow-up therapy included penicillin -streptomycin and iron liver tablets. The vermifuge was repeated in 10 days. Since clinical improvement was evidenced, the cat was discharged and iron liver tablets and terramycin tablets were dispensed. A month later the cat was returned with the owner's comment that the cat was just not doing well. Treatment was instituted to combat anemia, but response was slight. At the request of the owner, the cat was euthanized. Necropsy revealed two bleeding gastric ulcers (covered by a loose fibrin network) just anterior to the pylorus. One of the ulcers had penetrated the pyloric region, and there was blood in the peritoneal cavity. There were no other gross lesions. We concluded that the ulcers were the cause of the anemia.

NUMBER 00015
Collins, D.R.
Thoracic Tumor in a Cat.
Vet.Med./Small Anim.Clin. 59(5):459,1964.

A 12-year old spayed cat was presented to our clinic with respiratory difficulty and anorexia. The temperature was normal but the WBC was slightly elevated. Pneumonia of unknown etiology was tentatively diagnosed. Original treatment with combined penicillin-streptomycin and corticosteroids was changed to meratycin supported with b-complex and senile metabolic treatment. The respiratory difficulty and anorexia was unresponsive to therapy and became progressively worse...with emaciation, depression, dyspnea, cyanosis & a gradual drop in body temperature. A metastatic tumor was suspected when radiographic examination revealed multiple shadows in the lungs and mediastium. Euthanasia was recommended. At necropsy, lesions resembling a granulomatous disease were found. And at necropsy, an advanced hydrothorax with serosanguinous fluid was seen. Scribed, granular nodules that were whitish in color with a yellowish viscous fluid in their centers. Mediastional and bronchial nodes were involved. A large (2x3 cm) mass surrounded the trachea at its bifurcation and involved the larger coronary vessels as it left the heart. The parietal pleura was involved with granular, whitish proliferations particularly prominent over each rib. About 2/3 of the lung tissue was involved, leaving only a small amount of functional lung. Histopathology reports showed a carotid body tumor with metastasis to the lung and thoracic viscera.

NUMBER 00016

Parrish, H.M.
Blenden, H.C.
Weil, T.P.
Some Missing Measurements in Comparative Medicine.
Can.J.Comp.Med. 32:483-485,1968.

At the present time it is difficult to make comparisons of animal diseases in various geographical areas. Some missing measurements which limit these comparisons are: the lack of an internationally accepted system to classify diseases; the lack of routinely collected information about animal births, diseases and deaths; the lack of normal or standard values for many species; the lack of methods to define animal populations at various points in time. Most of these problems have been faced and solved for human diseases. Work should be started immediately to develope similar research methods for animal diseases.

NUMBER 00017

Chen, H.
A Case of Feline Papilliferous Mammary Adenocarcinoma with Widespread Metastases.
Can.J.Comp.Med. 32:465-467,1968.

A papilliferous mammary adenocarcinoma with generalized metastases, including multiple involvement of the brain, was found in a 14-year old female native born (Taiwan) cat. No nervous signs, except some behavioral changes, were noted.

NUMBER 00018

Henry, J.L.
Calaresu, F.R.
Topography and Numerical Distribution of Neurons of the Thoraco-lumbar Intermediolateral Nucleus in the Cat.
J.Comp.Neurol.,1972.

NUMBER 00019

Cirik, V.
Clinical Features of Aujesky's Disease in Cats.
Vet.Glasnik 17:499,1963.
In 245 cats clinical symptoms of Aujesky's disease fell into 3 distinct groups. One was marked by pruritis, salivation and manifestations of pain; the 2nd by rabies-like raving fits; and third by depression and vomiting. Since none of 87 humans who had been attacked by infected cats developed any symptoms in the course of 1-3 years after the bite, it was assumed that the disease is not transmissible from cats to man.

NUMBER 00020

Mehrishi, J.N.
Thomson, A.E.R.
Relationship Between pH and Electrophoretic Mobility for Lymphocytes Circulating in Chronic Lymphocytic Leukemia.
Nature (London) 219:1080-1081,1968.
We have attempted the electrokinetic relationships of lymphocytes circulating in a patient with chronic lymphocytic leukemia because lymphocytes from certain people with this disorder have been reported to possess adhesiveness for polystyrene beads different than normal lymphocytes. The electrophoretic mobilities of saline washed lymphocytes obtained from this patient were determined at 25C in the pH range of 1.9 to 13.7 with a constant ionic strength of saline (0.145 M). The relationship between pH and electrophoretic mobility suggests that the electrokinetic behavior of the lymphocytes arose as a result of the presence of several ionizable (acidic and basic) groups on the surface.

NUMBER 00021

Vernon, R.G.
Treatment for Feline Stomatitis.
Modern Vet.Pract. 45(4):64-65,1964.
A case description of recurrent, chronic stomatitis is made. The author suggests Vit A, Vit C and/or citrus bioflavins, with B vitamins at high, if not massive levels, would be beneficial.

NUMBER 00022

Anon.
Permadust and other sorptive dusts for control of insects and ectoparasites.
Laboratory Essentials, Inc. 180 Higbie Lane, W. Islip, N.Y.
An effective dust control of insects in buildings. Mainly composed of silica gel and "knock-down" insecticides.

NUMBER 00023

Dale, H.E.
Elefson, E.E.
Niemeyer, K.H.
Influence of Enviromental Temperature on Recovery of Dogs From Pentobarbital Anesthesia.
Amer.J.Vet.Res. 29(7):1339-1347,1968.

Normal dogs anesthetized with pentobarbital sodium were exposed to recovery room temperatures of 32C, 27C, 21C, 16C and 100C. Rectal temperatures were measured at 30 minute intervals. Duration of sleeping time was estimated by reappearance of pedal and palpebral reflexes. 80 dogs were used in the experiment, 16 at each recovery room temperature. Hypothermia was apparent in dogs exposed to air temperatures below 27C. Decrease in rectal temperatures ranged from 1-5 degrees at air temperature of 27C, to 10-18 degrees at air temp. of 10C. Considerable variation was evident among individual dogs, but there were 2 general patterns of response. One group of dogs had various degrees of initial hypothermia which was spontaneously reversed as the dog recovered from anesthesia. The other group of dogs had a more severe and prolonged fall in temperature, and although this hypothermia was reversed spontaneously at air temperatures of 27 and 32C, it was progressive and frequently fatal in dogs exposed to air temperatures of 10 and 16C. These two patterns of response were not related to body weight, coat or dose of pentobarbital. Hypothermia prolonged sleeping time, as determined by reflex signs of anesthesia. The pedal reflex appeared, on the average, after 224 minutes in dogs exposed to air temperatures of 10C and after 143 minutes at air temperatures of 32C; other values were intermediate. Hypothermia exaggerated the mortality of dogs under pentobarbital anesthesia. Of the 16 dogs exposed to each air temperature, 6 died at 10C, 4 died at 16C and 2 died at 21C. A total of 42 dogs had, at one time or another, rectal temperatures of 35C or less, and 12 of this group ultimately died. 19 dogs had rectal temperatures of 30C or less and 9 of these died. Eight dogs in a moribund state were transferred from low enviromental temperature to an air temperature of 32C, but were not otherwise treated; all survived.

NUMBER 00024

Illert, M.
Gabriel, M.
Mapping the Cord of the Spinal Cats for Sympathetic and Blood Pressure Responses.
Brain Res. 23:274-276,1970.

NUMBER 00025

Lessard, J.L.
Smits, M.R.
Dibona, F.J.
Taketa, F.
Structural and Functional Properties of Cat

Hemoglobin.
Biochem.Biophys.Res.Comm. 24:705,1966.
Hemolysates of cat erythrocytes contain two HB components (I & II), with much lower oxygen affinities than HBA. Hybridization with human HB shows that I and II contain identical alpha chains and different beta chains. Tryptic fingerprints of isolated chains also show differences only in the beta chains. I and II contain more basic and sulfur amino acids than HBA. Reactions with NEM and PCMB show that each contains a total of 8 -SH groups, all reactive. 3 -SH groups are present in each alpha and 1 in each beta chain. Stepwise NEM alkylation causes a progressive increase in oxygen affinity proportional to the binding of upto 6 SH groups. Both hybrid molecules, alpha 2, A beta 2 cat and alpha 2 cat beta 2 A exhibit higher oxygen affinity than the parent molecules. The Bohr effect and N is essentially unchanged. In agreement with Antonini et al, the data suggests that the oxygen affinity of a HB molecule depends upon the identity and specific interactions between alpha and beta chains.

NUMBER 00026

Burdi, A.R.
Toluidine Blue-Alizarin Red S Staining of Cartilage and Bone In Whole-mount Skeletons in Vitro.
Stain Tech. 43 (2):45-48,1965.
Cartilage and bone of the developing skeleton can be reliably differentiated in whole-mount preparations with toluidine blue-alizarin red S staining after FAA fixation. The recommended staining procedure is based chiefly on the use of newborn white and Swiss-Webster mice, 4-9 days postnatal, but was also tested on mice and rats 3-8 wk. of age. Procedure: sacrifice, skin, eviscerate, remove body fat, and place specimens in FAA (formalin 1: acetic acid 1: 70% alcohol 8) for approximately 40 min., stain in 0.06% toluidine blue made in 70% ethyl alcohol for 48 hr at room temperature. Use 20 volumes of stain solution to estim. vol. of specimen. Destain soft tissues in 35% ethyl alcohol, 20 hr; 50% for 28 hr and 70% for 8 hour. Counterstain in a fresh prepared 1% aqueous solution of KOH to which is added 2-3 drops of 0.1% alizarin red S per 100 ml of solution. Each day, for 3 days, transfer the specimen to a fresh 1% KOH - alizarin mixture, or until the bones have reached the desired intensity of red and soft tissues have cleared. Rinse in water and place in a 1:1 mixture of glycerol and ethanol for 1-2 hr, then transfer the specimen to fresh glycerol-alcohol for final clearing and storage. Older mice & rats require procedural modifications: 1. fixation for 1 hr, 2. 0.12% toluidine blue, 3. maceration for 4 days in 3.3% KOH - Alizarin, and 4. preliminary clearing for 24 hr in a mixture of glycerol 2: 70% ethanol 2: and benzyl alcohol, 1 (v/v) before placing in a 1:1 alcohol glycerol mixture.

NUMBER 00027

Feldman, D.G.
Gross, L.
Electron Microscopic Study of Spontaneous Mammary Carcinomas in Cats and Dogs: Virus-like Particles in Cat Mammary Carcinomas.
Cancer Res. 31:1261-1267,1971.

Electron microscopic study of 11 spontaneous cat mammary tumors revealed the presence of virus-like particles in 5 of the tumors examined. In three tumors, spherical particles with two concentric shells surrounding an electron-lucent center were found budding from, or free within, the cisternae of the endoplasmic reticulum. In one tumor, spherical particles with four concentric shells surrounding an electron-lucent center were observed budding from the cell membranes or free within the intercellular spaces. In the fifth tumor, both types of particles were present. One or two particles with large, centrally located nucleoids were found within the cisternae of the endoplasmic reticulum in three tumors examined. Whether these particles are etiologically related to the tumors in which they were found or are merely passenger agents cannot be determined at the present time. Eleven spontaneous dog mammary tumors were also studied; no virus-like particles could be found in any of these tumors.

NUMBER 00028

Waldron-Edward, D.
Paul, T.M.
Skoryna, S.C.
Studies on the Inhibition of Intestinal Absorption of Radioactive Strontium III. The Effect of Administration of Sodium Alginate in Food and Drinking Water.
Can.Med.Assoc.J. 91:1006-1010,1964.

A method is reported which permits selective absorption of radioactive strontium from ingested food, permitting calcium to be available to the body. Studies were carried out by measuring bone uptake of SR89 and CA45 when various amounts of sod. alginate was fed with the diet. Long term studies were made in which 2 different levels of radioactivity were used, to determine the pattern of SR89 deposition with continuous intake of binding agent. It was found that administration of sodium alginate as a jelly overcomes the problem of constipation and effectively reduces SR89 uptake, upto 83% This fact represents a significant finding with respect to the use of the compound in human subjects. Addition of sodium alginate to drinking water is effective with low levels of SR89 intake. This naturally occurring water-soluble macromolecular substance possesses several advantages for the suppression of absorption of radioactive strontium when compared with synthetic ion exchange resins; there is no disturbance of electrolyte balance; efficiency is not reduced by treatment over a prolonged period of time; and finally, the product is palatable.

NUMBER 00029
Schermer, S.
(The Morphology of the Blood of Laboratory Animals: The Cat). pages 11A-92, J.A.Barth, Leipzig,1954.
A German text giving a good review of numbers and morphology of blood cells. Reactions to pyrogens in the cat is also given.

NUMBER 00030
Yamamura, H.
The Dynamic Morphological Changes in Mouse Embryos During the Sensitive Phase of Organogenesis.
Zeiss Information, no.65:85-87.
A description, with excellent photographs, of differentiation of C57 Bl/10 and C57 Bl/6 from 8-14 days after mating.

NUMBER 00031
Kovach,J.K.
Kling, A.
Mechanisms of Neonate Sucking Behavior in the Kitten.
Anim.Behav. 15:91-101,1961.
The mechanisms of the neonate sucking behavior of the kitten were studied and the following observations were made: (1) while sucking on an artificial stimulus is present at birth, by the age of 20 days it is completely absent from the initial response to an artificial feeding nipple forced into the mouth. Repeated forced feeding experience with such a nipple, however, results in a regular sucking pattern up to 40 days of age. Beyond the age of 40 days the kittens learn to obtain milk from the feeding bottle by chewing on the nipple instead of by sucking. (2) with increasing age and experience there is a gradual increase and a consequent gradual decrease in the amount of time spent with non-nutritive sucking. (3) the maturational improvements in the kittens' ability to learn to suck from a bottle emerge in two steps; the first, at 7 days of age, seems to be associated with the emergence of vision, while the second, at around 30 days of age, is parallel with the newly emerged response to solid food. (4) complete sucking deprivation and individual isolation render the kittens unable to initiate sucking from the mother if the deprivation lasts for 23 days or more. (5) kittens raised in group isolation by force feeding learn to suck on each others' fur and genital areas; suck deprivation does not interfere with the kittens' ability to initiate sucking on the mother. (6) the destruction of the olfactory bulbs renders the kittens unable to initiate sucking on the mother irrespective of the length of the sucking experience prior to the operation; it is the ability to find the mother's nipple and to respond to it that appears to be lost in these kittens. (7) the destruction of the olfactory bulbs, however, does not interfere with the kittens' ability to learn to suck from the bottle, nor does

it interfere with the retention of such a preoperative habit. These observations were discussed with particular emphasis on their possible implications for the role of neonate reflex activities in the early establishment of persistent behavior patterns.

NUMBER 00032

Hall, V.E.
Pierce, G.N., Jr.
Litter Size, Birth Weight and Growth to Weaning in the Cat.
Anat.Rec. 60:111-124,1934.

The mean litter size in domestic cats is 3.88 kittens, the larger cats tend to have more kittens in the litter. The mean birth weight of kittens born in litters of 5 is significantly greater than that of kittens born in smaller or larger litters. This relation appears to be peculiar to the cat, at least in the forms so far studied. The birth weight of kittens born of smaller mothers is significantly greater than that of kittens born of larger mothers. This is the converse of the relation reported for rodents. The growth curve of kittens is practically linear up to the 50th day of life. Its variability is comparable to that observed in other forms. The rate of growth is somewhat faster in kittens below average in birth weight, but does not seem to be clearly related to either litter size or weight of the mother.

NUMBER 00033

Latimer, H.B.
Ibsen, H.L.
The Postnatal Growth in Body Weight of the Cat.
Anat.Rec. 52(1):1-5,1932.

A short report on 6 males and 6 female kittens' body weight from birth through 22 weeks of age. Both sexes' means are similar until 8 weeks when males' increase more rapidly. Means and ranges for 6 in each sex are given for each week upto 13 weeks. There was no post-natal decrease.

NUMBER 00034

Latimer, H.B.
Prenatal Growth of the Cat.
Anat.Rec. 60(1):23-41.

Empirical formulae are given whereby the weight or the length of the digestive tube or of its divisions may be derived from either the body weight or the body length, within the given limits. The weights of the tube and of its four subdivisions plotted on body weight or nose-anus length form curves which are concave superiorly showing that they grow at an increased rate. The lengths of the tube and its parts plotted on nose-anus length are likewise concave superiorly with exception of the esophagus which had a constant ratio to the body length and so forms a straight line curve. The same lenghts plotted on body weight form curves convex superiorly, or they increase most rapidly at first. The weight of the entire tube increases from about 1 to a little over 5 per cent of the body weight. The length of the tube increases from about 50 to 375 per cent of the body length. During this growth period the small and the large intestine increase in relative weight while the stomach and the esophagus decrease. The small intestine alone increases in relative length while all the other subdivisions decrease. The linear relations are more constant for the larger fetuses and they also become established earlier than do the relative weights. The total increase in weight for the entire tube and all of its parts is more than the total increase in body weight; The total increases, from least to greatest are as follows: esophagus, stomach, entire tube, large intestine and small intestine. The total increases in the lengths and in order from least to greatest they are : esophagus, large intestine, entire tube and small intestine. The greatest increase in weight per unit of length is found in the large intestine, next in the small intestine then the entire tube and least in the esophagus. These values were not computed for the stomach.

NUMBER 00035
Jarrett, W.F.H.
Experimental Studies of Feline and Bovine Leukemia.
Proc.Roy.Soc.Med. 59:61-62,1966.
To summarize, feline leukemia can be transmitted using cell free material and the cells of the consequent leukemia contain particles of the leukemia virus type. This is the first time that this has been achieved in a large mammal with material from spontaneous disease of a type approximating to that in the human subject. It should be emphasized that we have examined by electron microscopy a large amount of tissue from spontaneous feline leukemias without finding the characteristic virus particles, which are so numerous in experimental tumors.

NUMBER 00036
Gross, L.
Feldman, D.G.
Virus Particles in Guinea Pig Leukemia and Cat Mammary Carcinoma.
Proc.Am.Assoc.Cancer Res. 10:33,1969.

NUMBER 00037
Causey, E.W.
Examination of the Spinal Cord and Spinal Nerves from the Functional Standpoint.
source unknown.
A very good 6-page typewritten outline of examination of small animals for neurological diagnosis.

NUMBER 00038

Meier, H.
Patterson, D.F.
Myelogenous Leukemia in a cat.
J.A.V.M.A. :211-215,1956.

A diagnosis of myelogenous leukemia of the cat was established by the occurrence of primitive blood cells which were identified as cells of the granulocytic series. Mitotic figures indicated an acute type of leukemia. Myeloid hyperplasia and a shift to the left in the marrow, increased amount of splenic red pulp, an almost complete absence of white matter, and leukemic infiltration of the liver, kidneys, and heart justified the diagnosis. Severe anemia, indicated by the low erythrocyte count hemoglobin level, resulted from crowding out the erythropoietic tissue of the bone marrow. Marked extramedullary erythropoiesis was considered an expression of latent erythropoietic potentialities of various mesenchymal structures. The total amount of extramedullary erythropoiesis, however, was inadequate to compensate for the severe myelophthisis.

NUMBER 00039

Schmidt. R.E.
Langham, R.F.
A survey of Feline Neoplasms.
J.A.V.M.A. 151(10):1325-1329,1967.

In a study of 256 neoplasms from 256 cats, it was found that 72 per cent were malignant and represented 32 different types. The most common neoplasm was malignant lymphoma, followed in order of frequency by fibrous connective tissue neoplasms, mammary gland tumors, squamous cell carcinomas, and andenocarcinomas of undetermined origin. One mixed mammary tumor, which is a rarity in cats, was found. Mesenchymal tumors outnumbered those of epithelial origin, and there were 2 mixed-cell tumors. No significant predilection for a particular sex or age was observed except for the reproductive tract in the female.

NUMBER 00040

Holzworth, J.
Leukemia and Related Neoplasms in Cat. I. Lymphoid Malignancies.
J.A.V.M.A. 136(2):47-69,1960.

Leukemia, denoting in the broadest sense any malignant proliferation of blood-forming tissues, has long been recognized as occuring not uncommonly in cattle and dogs and with great frequency in fowl. It is not generally appreciated, however, that such disorders are extraordinarily prevalent in the domestic cat. To cite the evidence of records at the Angell Memorial Hospital for a 12-year period, of 4,004 dogs necropsied, 138 or about 3.5 per cent suffered from some type of malignancy of blood-forming tissue, while among 1,425 cats, or about 10 per cent were so effective. The purpose of this study, by a clinician and for clinicians, is to present a practical survey of the tremendously varied forms that malignancies of blood-forming tissue may assume in the cat. One hundred and fifty-five cases of leukemic disorders of various types recognized in cats at the Angell Memorial Animal Hospital in a 12-year period constitute the basis of this study. One of the classic reviews of these types of feline disorders.

NUMBER 00042

Ashkenazi, R.
Holman, R.B.
Vogt, M.
Release of Transmitters on Stimulation of the Nucleus Linearis Raphe in the Cat.
J.Physiol. 223:255-259,1972.

The nucleus linearis intermedius raphe and the nucleus linearis rostralis were stimulated during the perfusion of the anterior horn of the right lateral ventricle of anaesthetized cats. Whereas release of 5-hydroxytryptamine (5-HT) was consistently obtained, there was no release of acetylcholine (ACh). The independence of the release of 5-HT from that of ACh was seen both during low basal release of ACh (rising base line), and during the period when a plateau of resting release had been reached. It was also demonstrated in experiments in which the same perfusate was examined for both compounds.

NUMBER 00043

Conroy, J.D.
Questions and Answers: Continuous Shedding by Cats.
Mod.Vet.Pract. 45(8):62,1964.

Cats that live outdoors will usually have 1 heavy shedding period in the late spring. Cats living inside will shed continuously the year round. The most effective way of controlling excessive hair is by brushing the cat everyday with a wire or natural bristle brush. If the hair loss is accompanied by dandruff, it is helpful to add some animal fat to the cat's diet. When heavy shedding is accompanied by alopecia, certain specific cutaneous diseases should be considered in the differential diagnosis. Among these are endocrine alopecia, gestation or lactation alopecia, nutritional alopecia, and external parasite infestations, notably flea-bite dermatities.

NUMBER 00044

Stansbury, R.L.
West, W.R.
Okone, H.M.

Renaux, E.A.
Marcus, M.J.
Blind, G.R.
Cole, S.W.
Degeer, T.R.
McCoy, F.A.
Our Panel Reports on: What Precautions do you Routinely Take to Prevent the Transmissions of Infections Among Cats Admitted to Your Hospital?
Mod.Vet.Pract. 45(8):52-56,1965.
Contributions made by practitioners discussing their methods of in-hospital control of upper respiratory infections caused by air-borne viruses. Besides some rather empirical suggestions, the main recommendations are: a history and exam before admission; isolation or non-crowding; and vaccination.

NUMBER 00045
Johnson, R.M.
Anderson, A.C.
Gee, W.
Parasitism in an Established Dog Kennel.
Lab.Anim.Care 13(5):731-736,1963.
The incidence of parasitism among beagles maintained principally for longevity studies was 76% for two years after the colony was established. The numbers of breeding stock was 80 females and 7 males selected from various parts of the country, with occaisional replacement of individuals so as to maintain heterogeneity. Therapeutic procedures and strict prophylaxis reduced the incidence in the succeeding 6 years to a stable level of 3% in the enlarged colony (400-500 beagles). These percentages are based on over 9,000 fecal examinations. This is attributable to routine examinations, improved kennel design, and other factors unfavorable to the parasites (through most of the species originally present are still present on the kennel site). Observed most often have been ova of Trichuris and Toxocara canis. Incidence has been highest in the early winter. No clinical evidence of external parasitism has been seen.

NUMBER 00046
Cornelius, O.
The Routine Care of Cats in the Laboratory.
Lab.Anim.Bur.M.R.C. Lab.Collect.Papers:41-42,1952.
An experiment in breeding and rearing cats in the laboratory is at present being undertaken in the Animal House of the Royal Free Hospital School of Medicine, where, over a year, 17 litters have been reared from birth and ten litters from approximately 8 weeks of age. The author discusses some general attitudes towards the cat and general and specific routines for husbandry that she has found successful.

NUMBER 00047
Price, W.T.
An Experience in Cat Breeding.
Lab.Anim.Bur., M.R.C. Lab.Collected Papers,1952.
It is a popular belief that cats will not breed in captivity. At the Royal Veterinary Hospital, London, 40 cats have been bred and reared successfully under the regime described. The author discusses accommodations, reproduction and care of the young.

NUMBER 00048
Clemente, C.D.
Studies of Sexual Behavior in Cats and Implications for the Management of a Breeding Colony.
Proc.Animal Care Panel 8:20-22,1958.
Several important features of sexual behavior in the cat are relevant in the management of a breeding colony. 1. adaptation of the male to "territory" so that upon presentation of an estrus female, copulation can be expected immediately. 2.recognition of the estrus state in the female and presentation to the male only when this behavior is evident. 3.maintenance of adaptation in the male by presentation of behaviorally estrus females, even if this necessitates spaying certain females and implanting pellets of female sex hormone.

NUMBER 00049
Gershoff, S.M.
The Nutritional Requirements of Cats.
Proc.Anim.Care Panel 11(1):49-53,1961.
The author's personal experience and a review of recent studies on cat nutrition provide the following information: 1.weanlings need about 250 Cal/day/kg body weight, while kittens several months old and inactive adults need only about 150 and 60 Cal/day/kg, respectively. 2.although precise fat requirements are not known, high-fat diets are more palatable and appear necessary for best growth when fed purified rations. 3.protein requirements of cats seem to be higher than that of other animals, including dogs. 4.Diets containing upto 30% ash have been fed to cats for one year without causing urinary calculi. 5.Clinical signs of avitaminosis are tabulated, as are the vitamin supplements given to cats at the author's and one other lab.

NUMBER 00050
Anon.
Intranasal Intubation for New Uses Stressed.
Vet.Dispatch 6(4),1964.
The value of intranasal intubation as a versatile technique

with important applications in both diagnosis and therapy cannot be overestimated. The intubation principle lends itself to a wide range of uses, from providing a method for feeding debilitated cats to introducing contrast media for the purpose of diagnosing gastrointestinal lesions, according to Dr.W.L. Foster. The technique includes the use of a drop or two of an appropriate anesthetic agent instilled into the nostril. This facilitates the entry of a No. 5 French catheter in addition to providing a local anesthetic. Ten cc of contrast media introduced through the intranasal route is sufficient to permit excellent visualization of a possible obstruction of the stomach or intestines or any other pathology of the gastrointestinal tract.

NUMBER 00051
Anon.
Cats Found Less Prone to Heart Ills Than Dog.
Vet.Dispatch 6(4),1964.
Cats, like dogs and humans, suffer from heart disease, but the incidence is lower and the condition encountered in the feline is different. The report was based upon cumulative observations made during extensive cardiovascular studies of over 200 felines, including most kinds of house cats and several zoo varieties. The study was conducted as part of a comparative cardiovascular research program. In sharp contrast to dogs, in whom studies revealed a high incidence (101 of 256) of spontaneous arteriosclerosis, especially of the posterior abdominal aorta, detailed gross examination of 58 feline aortas and major blood vessels revealed only 1 suspect of arteriosclerosis in domestic cats. There was 11 lesions of mitral valve disease in 202 cats; a similar study in dogs showed a 40% fequency of mitral valvulitis and fibrosis in 500 necropsies. There was a high incidence of medial hyperplasia of pulmonary arterioles when 84 of 122 cats showed this. Several cats showed this lesion at an early age, the youngest at 5 weeks of age.

NUMBER 00052
Taber, E.
Brodal, A.
Walberg, F.
The Raphe Nuclei of the Brain Stem of the Cat.
J.Comp.Neurol. 114:161-188,1960.

NUMBER 00053
Bardens, J.W.
Use of Metofane (Methoxyflurane) Anesthetic in Small Animal Practice.
Allied Vet., pages 69-74, May-June,1964.
A wide variety of operative procedures has been performed with Metofane as the anesthetic agent. No deaths were attributed directly to the anesthetic. Numerous techniques of administration were employed with equal success.

Metofane used in combination with other drugs for pre-induction & induction showed equally good results. In all conditions and surgical procedures, the margin of safety is far greater with methoxyflurane than with the popular barbiturates. Metofane is similar to ether in its anesthetic effects, but does not have the potential explosive factor associated with ether. Metofane produces good muscle relaxation, the cardiac rate remains stable, and no supplemental drug is needed to produce its anesthetic effects. The rapid elimination of Metofane from the lungs increases its safety without altering its properties.

NUMBER 00054

Low, D.G.
Questions and Answers: Nonspecific Diarrhea in Cats.
Mod.Vet. Practice 5(2):64,1964.
In response to a question for treatment for persistent diarrhea in adult cats without any other symptoms, the author recommends as possibilities for the cause: diet, internal parasites, pancreatic dysfunction, mal-absorption of fats. Treatment of symptoms included low residue diet, Enteromycin powder or Donnatal.

NUMBER 00055

Blakemore, J.C.
Clinical Hematology for the Practitioner: Part III.
Mod.Vet. Practice 5(2):34-38,1964.
This final article in this series considers variations which occur among white blood cells in healthy and diseased animals. Using data by the author, the leukocyte values for normal cats are: 8000-20000 WBC; 60-70% neutrophils; 30-40% lymphocytes; 1-15% eosinophils; 1-6% monocytes; 0-1% basophils.

NUMBER 00056

Scott. P.P.
McKusick, V.A.
McKusick, A.B.
The Nature of Osteogenesis Imperfecta in Cats.
J.Bone Joint Surg. 45-a(1):125-134,1963.
On the basis of experience with a kindred of Burmese cats, it is concluded that osteogenesis imperfecta in the cat is not determined genetically as a simple autosomal trait, but rather is a nutritional disorder. The conclusion is based on the following findings:
1.the identity of the spontaneous disorder to that produced experimentally by a beef-heart diet;
2.the exclusion of simple recessive inheritance by breeding experiments;
3.the finding of the syndrome whenever the diet consisted mainly of beef heart or horse meat and not when it consisted mainly of whole sea fish;
4.the rapid improvement of the dystrophy with administration of iodine, as in the experimentally produced

disorder. Genetic determination of unusual nutritional requirements is not excluded by the experiments described. It is possible that Siamese and Burmese cats have a higher requirement for calcium than other varieties since the bone disorder is observed mainly in them.

NUMBER 00057

Moore, T.
Sharman, I.M.
Scott, P.P.
Vitamin A in the Kidney of the Cat.
Res.Vet.Sci. 4:397-407,1963.

Vitamin A was estimated, by the antimony trichloride method, in kidneys from 82 cats, which had been fed upon 3 different kinds of diet and submitted to various experimental procedures. The mean of 150 I.U./G. was much higher than values which had been reported for all other species so far examined. No consistent correlation could be found between the Vitamin A contents of the kidneys and livers. In many of the cats the concentration of Vitamin A in the kidney exceeded, often by a higher factor, the concentration in the liver. The presence of unusually large amounts of fats was confirmed, in the kidney cortices of most of the cats, by chemical and histological methods. No consistent correlation could be found, however, between the concentrations of fat and Vitamin A. Flourescence microscopy revealed the presence of highly flourescent fat globules in certain parts of the kidney, and particularly in the medullary rays, which did not coincide with the main distribution of fat. In agreement with the conclusion that the flourescence was due to Vitamin A the globules ceased to flouresce after irradiation had been continued for a few minutes.

NUMBER 00058

Bock, G.R.
Webster, W.R.
Aitkin, L.M.
Discharge Patterns of Single Units in Inferior Colliculus of the Alert Cat.
J.Neurophysiol. 35(2):265-276,1972.

Discharge patterns of single neurons in the inferior colliculus of unanesthetized cats were investigated. All data were obtained with binaural free-field stimulation. All cells exhibited spontaneous discharge and depression of spontaneous activity was a prominent feature of many discharge patterns. Response areas were broad and response patterns often differed significantly in different regions of the response area. One cell in the sample exhibited a secure form of phase-locking unlike the phase-locking observed in auditory nerve fibers. Spike counts generally increased monotonically as tone intensity increased. These observations indicate that responses of cells in the inferior colliculus of the alert cat are determined by complex interactions of frequency-dependent excitatory and inhibitory inputs.

NUMBER 00059
Anon.
Beliefs About 6-month Dog Breeding Cycles Questioned.
Animal Health News 1(2):6,1967.
Commonly held beliefs that dogs have two peaks of sexual activity during the year which occur at 6-month intervals were questioned today by animal care scientists from the Norwich Pharmacal Co. Analysis of breeding records for beagles kept by the company over the past 12 years reveals that estrus occurs approximately every 7.1 months. And in this colony of dogs, during the last 3 years, the breeding period was uniform throughout the year. Onset of first estrus occurred at about 11.2 months of age, confirming earlier reports for similar colonies of beagles. Yet there were individual dogs which deviated markedly from this average with the age of first estrus ranging from 216 to 696 days. The interval between the first and second estrus was a fairly accurate indicator of future cycles in individual dogs. The interval seems to be inheritable so commercial breeders of dogs could expect to make some progress in reducing the time between whelpings by careful selection of females for breeding.

NUMBER 00060
Runkle, R.S.
Laboratory Animal Housing, Part III,
AIA Journal, April,1964.
Discussion of physical aspects of indoor housing for lab. animals. Includes recommendations for wall and floor finishes, lighting, plumbing and air conditioning. For the caged cat, the following are recommended: 70-75 degrees F.; 40-45% relative humidity; for cats upto 8 pounds, 12 cfm/cat for air movement and 34 BTU/hr/cat; for 160 cats/month use 1000 pounds of bedding and 150 grams of feed per cat per day.

NUMBER 00061
Anon.
Teratogenic Effect in Dogs Possible With High Dosages of Vitamin A.
Anim.Health News 1(2):14,1967.
The possibility of a teratogenic effect associated with Vitamin A dosages was reported by DR.W.O. Wiersig of the Iowa State Univ., College of Vet.Med. at the Midwestern Interprofessional Seminar on Diseases Common to Animals and Man. A series of 16 mated beagle bitches received varying oral doses of Vitamin A daily at varying periods of pregnancy from days 9-31. Whelping occurred normally or c-section was performed when signs of whelping were evident. Cleft palate was produced when daily treatment was at a dosage of at least 125,000 I.U. Vitamin

A/kg. of body weight and included days 17-22 if gestation length was 58-62 days. Other abnormalities observed were deformed and accessory auricles, kinked tails, reduced litter size, failure to litter, mummified fetuses, unicornual pregnancies and sanguinous amniotic fluid.

NUMBER 00062
Aitkin, L.M.
Anderson, D.J.
Brugge, J.F.
Tonotopic Organization and Discharge Characteristics of Single Neurons in Nuclei of the Lateral Lemniscus of the Cat.
J.Neurophysiol. 33:421-440,1970.

NUMBER 00063
Aitkin, L.M.
Dunlop, C.W.
Inhibition in the Medial Geniculate Body of the Cat.
Exptl.Brain Res. 7:68-83,1969.

NUMBER 00064
Degering, C.I.
Prenatal Therapeutic Radiation: Preliminary Report of Two Cases.
Oral Surg.,Oral Med.,Oral Path. 21:473-477,1966.
A case study of a female patient who received abdominal irradiation of the ovaries in excess of the 30-yr. max. permissible dose of 10r to genetic tissue, and who then gave birth to 2 children with dental anomalies is reported. The 20-yr old woman underwent radiotherapy for malignant lymphoma; technical details are given. From June 1957 to July 1960, 900 r of abdominal radiation was given. Two children were born during this period, but neither was irradiated in utero. Physical dissimilarities of the two children and developmental histories are compared. The clinical appearance of the dentitions of the two children is illustrated. Bitewing & apical radiographs of the anomalies of dentition were taken; apical films are presented. In case 1 it appeared that a supernumerary tooth developed in the maxillary midline. Oral examination of case one revealed normal soft tissues, prominent cusp formation, and supernumerary maxillary right deciduous lateral incisor. In case 2, the following were observed: enlarged tonsils, hyperplasia of palatal vault, prominent palatal mucous glands, prominent cusp formation, yellowish hue to dentition, and germinated lateral incisor-cuspid. Whether the anomalies reported represent natural mutations is open to question.

NUMBER 00065
Haigh, M.V.
Scott, A.

Some Radiological and Other Factors for Assessing Age in the Rhesus Monkey Using Animals of Known Age.
Lab.Anim.Care 15(1):57-73,1965.
In formulating and utilizing criteria for assessing the age of monkeys of unknown birth date, it is important to consider all the criteria available although each in itself may vary considerably. Four criteria are described, made from data of upto 6 male and 6 females. Sexual development criteria are testicle decent into the scrotum at 3.5-4 years, but without permanent establishment, and onset of menstruation at about 2.5 years. Body weight curves are different for the sexes, and are given in 2 graphs from 0.5 to 6.0 years. Foot length graphs for both sexes are also presented. An overall picture of dental make-up at definite time intervals, and the range of variation found in a small group of animals are given. Wrist and epiphyseal fusions are recommended as criteria of age because they are obvious in radiographs and clearly defined. Numerous figures and a complete chart contain the assessment data. Seven years plus sees the loss of these criteria in that growth is practically complete, bones fully ossified, the epiphyses fused and dentition completed.

NUMBER 00066
Fox, M.W.
Enviromental Factors Influencing Stereotyped and Allelomimetic Behavior in Animals.
Lab.Anim.Care 15(5):363-370,1965.
There are many factors which influence the normal behavior patterns of laboratory animals; several of these factors are controlled by routine animal care procedures. For example, enviromental constancy such as maintaining regular diurnal light rhythms for rodents and poultry, adequate cage space to prevent crowding stress and in fertility. Stereotyped and allelomimetic behavior are recognizable by the repetition of actions which are rigidly executed by the animal; the apparently purposeless activities which are repeatedly performed without any reward to motivate the behavior, although it is possible that the activity itself is rewarding so that self-reinforcement perpetuates the behavior. These phenomena have been observed in many different species, notably, in zoo animals reared (but not born) in captivity, and have been attributed to either boredom or lack of cage space, i.e., inactivity; early enviromental deprivation and restricted activity are considered the main etiological factors. Crowding, notably in rodents, may precipitate these abnormal, stereotyped behavior patterns; sudden traumatic stimuli (auditory) may disrupt normal behavior patterns in animals and stimulate allelomimetic or stereotyped behavior (which under such circumstances may be regarded as a displacement activity or thwarted escape behavior). This is especially seen in the lower mammals: more severe maladaptive behavior is seen in rodents which may devour their young if disturbed during nursing by sudden traumatic stimuli.

NUMBER 00067

Weaver, M.E.
Mckean, C.F.
Miniature Swine as Laboratory Animals.
Lab.Anim.Care 15(1):49-568,1965.

There has been a considerable interest in the pig as a laboratory animal because of its availability and its similarity in many respects to man. During the several years that we have used the Pitman-Moore strain of "miniature swine" we have been able to maintain the animals easily in laboratory animal quarters' conditions. Breeding is not difficult and cost of maintenance is not excessive, when compared with other large experimental animals. Pentabarbital is used routinely for anesthesia. The variety of surgical procedures and observations possible make this animal desirable for many types of experimental projects.

NUMBER 00068

Tomlin, D.H.
Henry, K.M.
Kon, S.K.
Autoradiographic Study of Growth and Calcium Metabolism in the Long Bones of the Rat.
Brit.J.Nutrition 7:235-256,1953.

The radioactive isotope 45-Ca has been used as a tracer to study bone growth and calcium metabolism in young and adult rats. A simple autoradiographic technique has been applied to study the localization of bone salts incorporated in the long bones during specific periods. In the age period from 4-6 weeks about 14% of the 4-week old diaphyseal bone Ca in the femur and humerus was renewed by exchange. The figure increased to a maximum of about 24% by the 16th week. Exchange of Ca was considerably less extensive in the bones of adult rats. The mechanism of growth in the femur and humerus is discussed in detail. Sites of apposition and resorption are so disposed as to produce a unified process of growth and remodeling and are closely related to the curvatures of the bone cortex. General agreement was found with the results of previous work in which Madder had been used. Some evidence was found of a modification in the normal growth mechanism of the femur when the Ca intake was changed from adequate to slightly suboptimal. It is suggested that this modification was such that less bone material was needed to produce a given cortical thickness. A similar effect was not observed in the humerus, probably owing to a difference in the mode of growth.

NUMBER 00069

Dickinson, C.D.
Scott, P.P.
Effects of Adding Penicillin and Aureomycin to the Diet of Cats.

J.Physiol. 8:380-385,1954.
The addition of penicillin and aureomycin to a diet containing 50% protein, mostly of animal origin, produced increased growth in kittens, accompanied by increased food intake and increased efficiency of food conversion, greater freedom from infection and an improvement in general health.

NUMBER 00070
Dickinson, C.D.
Scott, P.P.
The Effects of Penicillin on the Weight Gained by Kittens.
J.Physiol. 122:61p,1953.
Two preliminary experiments indicated that the addition of procaine penicillin to a high protein diet gave an increase in the weight gained by kittens aged between 14 and 22 weeks. Twelve kittens from 4 litters were used. The amounts of procaine penicillin (1 mg=1000 I.U.) added were 15, 30, and 60 mg/kg of diet (wet weight). At these levels some increase in the weight gained was apparent when compared with litter-mate control kittens receiving the basic diet alone. A noticeable decline in the weight was observed in the week immediately following withdrawal of the penicillin supplement, followed by a resumption of a normal increase in weight. 30 mg/kg appeared to be a suitable level of supplementation & was used in subsequent experiments. Twenty-four kittens from 7 litters were weaned on to the basic diet at about 6 weeks of age. They were divided into 2 groups whose mean weights differed only by 6 g. After 14 days, the meanweight of the kittens receiving penicillin had increased by more than 200 g over the mean weight of the kittens not receiving penicillin. Moreover, the kittens receiving penicillin appeared to be healthier and livelier than those in the control group, some of which had to be temporarily isolated for low-grade respiratory infections.

NUMBER 00071
Marston, J.H.
Chang, M.C.
The Breeding, Management and Reproductive Physiology of the Mongolian Gerbil (Meriones Unguiculatus).
Lab.Anim.Care 15(1):34-48,1965.
The management of a breeding colony of Mongolian Gerbils is described, and the following observations made:
1. over a period of 18 months 67.4% of 187 litters, or 66.2% of 835 young, were successfully weaned. The mean litter size at birth was 4.5 +/- 0.04 and there was no significant variation of litter size with increased parity. Mean litter size at weaning was 4.4 +/- 0.04.
2. at birth the sex ratio was 102.9 males to 100 females, whereas at weaning it was 99.6 males to 100 females.
3. the available data on post-natal development are summarized, together with observations on the reproductive life and overall reproductive performance. Ovulation and

mating were found to continue well beyond the female's reproductive life, which could extend from 3 to 20 months of age. The most fecund female delivered 10 litters, and the majority of females delivered 6 or more litters during their reproductive life.

4. it was difficult to characterize a regular, predictable oestrous cycle for the Mongolian Gerbil. The vaginal smears were of little use in defining the cycle, and so far no reliable cyclic changes have been recognized. Observations on the vaginal smear, oestrous behavior and general breeding pattern are described and illustrated. 5. approximately 70% of the matings in one series were observed at 5 P.M.; and 63% of the matings occurred within 7 days of pairing. It appeared that the mongolian gerbil was probably polyestrus, and that it possibly had a short (4-7 days) oestrus cycle.

6. the gestation period was 24-26 days. Almost 60% of the females experienced a post-partum mating within 3 days of parturition, but otherwise mating was not observed during lactation; 86% of the post-partum matings were fertile. It appeared that delayed implantation may occur during lactation, provided that the female was suckling more than two young.

7. ovulation appeared to occur spontaneously, and the mean ovulation rate for recently mated, mature females was 6.6 +/- 0.05 with no difference in the number of ovulations from the right and left ovaries. Generally similar ovulation rates were recorded from small groups of virgin females (7.4 +/- 0.5) and parous females after the post-partum mating (5.6 +/- 0.4). Following unilateral ovariectomy the remaining ovary ovulated 6.6 +/- 0.4 ova. Pre-natal mortality in this gerbil amounted to 32% of all ova. 8.nearly 11, of a group recently mated mature females
were found with 1 or more large cystic ovarian follicles although the rest of the genital tract appeared normal, and ovulation and fertilization could still occur. 9.
these results are discussed with a view to the improvement of the Mongolian Gerbil's breeding capacity and its suitability as a laboratory animal. The importance of the Mongolian Gerbil as another laboratory animal from the Family Cricetidae is emphasized.

NUMBER 00072

Bedell, D.M.
Guide for Rational Use of Antibiotic and Chemotherapeutic Agents.
Presented (?) at Amer.Anim.Hospital Seminar, 4-26-63.
Suggested rules for combination of therapeutic agents are:
1.avoid combining bacteriostatic & bacteriocidal drugs. 2. antagonism does not occur between members of the two bacteriostatic or between members of the two bacteriocidal groups.
3.bacteriostatic antibiotics are never synergistic, but may be additive.
4.bacteriocidal antibiotics may be synergistic.

5. combination therapy should be avoided if possible when in vitro testing has not been done.

NUMBER 00073

Bild, C.E.
Relationship of Clinical Hematology to Fluid Balance.
Presented at Amer.Anim.Hosp.Assoc.Seminar, 4-23-63.
A good concise discussion of the use of hematocrit as a tool for fluid balance diagnosis, treatment and prognosis in the dog. A scale of hematocrit values and the importance of type of therapeutic action is given.

NUMBER 00074

Latimer, H.B.
Weights and Linear Measurements of the Adult Cat.
Amer.J.Anat. 58(2):329-347,19?.
The body weights, the weights of the major parts and most of the various linear dimensions are more variable in the adult male cats. The coefficient of variation of the length of the forelimb is less than that of any of the three segments but in no other place in these linear measurements does the theory of compensating variability hold. The chief sex differences are in heavier body weight and the weights of the major parts in the male, and in the longer and wider head, longer tail, longer extremities and longer pelvis in the male cats. The weights of the divisions of the body form good correlations with both body weight and body length and these correlations average higher than the correlations between the linear dimensions and body length. The correlations show that the body length is a better criterion of the various dimensions of the male cat than the female.

NUMBER 00075

Da Silva, A.C.
The Domestic Cat as a Laboratory Animal for Experimental Nutrition Studies.I.General Considerations, Care and Feeding of the Animals.
Acta Physiol.Latino-Amer. 1:20-25,1950.
Care and handling of the domestic cat for nutrition experiments are described. Reference is made to interfering diseases. Source, selection, caging and diet are described and discussed.

NUMBER 00076

Dasilva, A.C.
The Domestic Cat as a Laboratory Animal for Experimental Nutrition Studies. II. Comparative Growth Rate and Hematology on Stock and Purified Rations.
Acta Physiol.Latino-Amer. 1:26-32,1950.
Comparative growth rate and hematology of the cat, on stock and purified rations were studied upto 1 year of

age. Results prove that, on a purified ration with a composition approximated to the cow's milk the known factors are satisfactory, although growth rate is slower on purified rations.

NUMBER 00077
Jarret, W.F.H.
Crighton, G.W.
Dalton, R.G.
Leukemia and Lymphosarcoma in Animals and Man. I. Lymphosarcoma or Leukemia in the Domestic Animals.
Vet.Rec. 79(23):693-699,1966.

It is impossible to condense a large and rapidly growing literature into a small review; we have tried to pick out from the literature, and from our personal experience, those facets of the disease in the different species which seem to us to be important to the general practitioner in the diagnosis and understanding of the disease; and those parts of the aetiological and epidemiological aspects which might concern those involved in state medicine and public health. Neoplasia of the lymphoid system is 1 of the most common malignancies of domestic animals. Yet it often goes undiagnosed in practice. The basic pathological process is a malignancy of lymphoid tissue, which is usually generalized, therefor the most acceptable name is lymphosarcoma. However, in the human subject, a common manifestation, much used in diagnosis, treatment and prognosis, is leukemia, i.e. the presence in the peripheral blood of large numbers of lymphocytes, which may or may not be of abnormal type. Hence, in the general medical and experimental literature, the name leukemia is used to describe the whole disease. When the generalized disease is present without a grossly abnormal blood picture, the apparently contradictory and rather ridiculous name aleukemic-leukemia is often used. The latter is the situation commonly found in domestic animals; although blood cells changes can, and do occur, they may be absent, even in the presence of widespread involvement of the carcass nodes, spleen and other organs.

NUMBER 00078
Kawakami, T.G.
Theilen, G.H.
Dungworth, D.L.
Munn, R.J.
Beall, S.G.
"C"-type Viral Particles in Plasma of Cats With Feline Leukemia.
Science 24 Nov.,1967.

Linear sucrose-density gradient was used to detect and isolate typical "C"-type viral particles in plasma of cats with spontaneous and experimentally induced leukemia. The density of the agent is similar to known Murine Leukemia Virus (1.15-1.17 grams per cubic cm). In the electron microscope the virus showed typical "C"-type particle morphology with various maturation stages. The maximum diameter of the mature viral particle in plasma was 115 millimicrons, a diameter slightly larger than budding particles observed in tissue. Leukemia was transmitted with cellular and cell-free inoculum after a 5-week period of latency.

NUMBER 00079

Burgen, A.S.V.
The secretion of Potassium in Saliva.
J.Physiol. 132:20-39,1956.

The concentration of potassium in saliva secreted from a previously inactive gland has an initial transient phase which passes into a lower steady state level. The potassium transient has been shown in saliva secreted from the cat and dog submaxillary gland and from the dog parotid gland. During the transient phase the intracellular potassium of the gland declined and was partially replaced with sodium. Initially the gland loses potassium into the blood as well as into the saliva. Subsequently the gland extracts potassium from the blood to maintain its potassium output. The initial rates of loss of potassium into the blood and saliva are directly related to each other and to the rate of saliva secretion. Both the initial potassium transient and the steady level are increased by a rise in the plasma and the steady level are increased by a rise in the plasma potassium. Change of body temperature has little effect on the potassium concentration in the saliva.

NUMBER 00080

Holmes, R.L.
Environmental Control of Reproduction.
New Scientist (no.420):644-646,1964.

The breeding behavior of animals can be modified by external influences, as farmers now well know, but the pathways in the brain that are involved remain obscure. Experiments with ferrets kept in artificial light point to a link between the sense organs and the hormone system.

NUMBER 00081

Murakami, H.
Violin, C.
Cohlan,S.Q.
The effect on the Growing Bone of Rat Offspring Treated Prenatally With Tetracycline.
Presented at 7th Ann.Meet. of the Teratology Society, Estes Park, Colo.,1967.

Tetracycline and oxytetracycline in varying dose ranges (40-80 mg/kg/daily) were administered intraperitoneally from the 13th-20th day of gestation to pregnant rats. Control animals received saline. The control and experimental animals were allowed to deliver and the offspring were reared until 60 days. The birthweight of experimental offspring was 30% less control birth weights. At 60 days of age this difference decreased to 12 percent. Average 60 day control weight and crown-rump length was 253 gm and 20.8 cm respectively, compared to 225 gm & 18cm for the experimental animals. Representative control & experimental offspring were sacrificed on the 1st, 5th, 10th, and 20th day of life. Histological study of the distal epiphysis of the femur and proximal epiphysis of the humerus revealed the following tetracycline effects on growing bone: 1.decreased diameter of the bone, 2.inhibition of the zone of hypertrophic cartilage, 3.decrease in primary spongiosa, 4.delay in calcification of the ossification centers, and 5.decrease in acid mucopolysaccharide deposition. The results indicate that the postnatal skeletal growth in the young rat is inhibited by transplacentally acquired tetracycline.

NUMBER 00082
Abderhalden, E.
(The Relationship of the Rate of Growth of Suckling Rabbits, Cats and Dogs to the Composition of their Milks).
Hoppe-Seyler's Z.f.Physiol.Chem. 26:487-497,1898.
The author shows data on 6 litters (26 kittens) where the birthweight of the litter doubles in a mean time of 9.5 days. Analysis of milk from 4 nursing queens, taken at 13, 18, and 11 days from queening, give an average value of: casein=3.7%, albumin=3.29%, protein=7.00%, fat=4.75% and sucrose=4.78%.

NUMBER 00083
Eruklar, S.D.
The Responses of Single Units of the Inferior Colliculus of the Cat to Acoustic Stimulation.
Proc.Roy.Soc., London, Series B, 150:336-335,1959.

NUMBER 00084
Evans, E.F.
Whitfield, I.C.
Classification of Unit Responses in the Auditory Cortex of the Unanesthetized and Unrestrained Cat.
J.Physiol., London 171:476-493,1964.

NUMBER 00085
Coronios, J.D.
Development of Behavior in the Fetal Cat.
Genet.Psychol.Monographs 14(4):283-385,1933.
A very broad and comprehensive review of the title subject.
Also contains some observations as to sexual behavior and colony care, vintage 1928.

NUMBER 00086

Schneider, R.
Frye, F.L.
Taylor, D.O.N.
Dorn, C.R.
A Household Cluster of Feline Malignant Lymphoma.
Cancer Res. 27:1316-1322,1967.

During a 3-1/2 year period, 3 histologically confirmed malignant lymphoma cases and 3 additional clinically diagnosed cases were observed among 34 cats kept for varying lengths of time in the same household. The 3 clinical diagnoses were supported by surgery and necropsy findings consistant with a diagnosis of malignant lymphoma. On the basis of existing incidence data, the occurance of 3 to 6 cases in 34 cats is far higher than would be expected by chance alone. The pattern and occurrence of cases may best be explained by horizontal transmission by an infectious agent. There was a continuum of contact from the 1st to the 6th. One case was not known to be related to the others. However, 5 of the 6 cases were related. therefor, there was a possibility of inheritance of a genetic factor which influenced susceptibility.

NUMBER 00087

Lawson, R.L.
Barranco, S.
Sorenson, A.M., Jr.
A Device to Restrain the Mouse, Rat, Hamster and Chinchilla to Facilitate Semen Collection and Other Reproductive Studies.
Lab.Anim.Care 16(1):72-79,1966.

Restraining jackets of pliable leather for use in laboratory procedures using, mice, rats, hamsters and chinchillas are diagramed and their uses explained. These devices are simple to construct and use, and facilitate such procedures as semen collection, insemination, collection of blood samples, injection and application of medication.

NUMBER 00088

Nelson, W.E.
Kaye, A.
Moore, M.
Willims, H.H.
Herrington, B.L.
Milking Techniques and the Composition of Guinea Pig Milk.
J.Nutrition 44:585-594,1951.

A milking machine of simplified design for use with small animals is described and the techniques used to obtain quantitative yields of milk during the entire lactation period of guinea pigs are discussed. Using these techniques, guinea pigs were milked for periods as long as 19 days without having nursed their young. A composite sample of guinea pig milk was analyzed for a larger number of constituents, and daily variations in milk yield, ascorbic acid, riboflavin and niacin concentrations are presented. Lactation curves for guinea pigs are presented which indicate that this animal is suitable for quantitative studies of the factors concerned with lactation.

NUMBER 00089
Whalen, R.E.
Nadler, R.D.
Suppression of the Development of Female Mating Behavior by Estrogen Administered in Infancy.
Science 141 (3577):273-274,1963.
The administration of estradiol benzoate subcutaneously to 4-day old female rats resulted in reduced mating in response to estrogen and progesterone in adulthood.

NUMBER 00090
Staples, R.E.
A Practical Method for Routine Clearing and Staining of Specimens.
source unknown.
A Modification of the Method of D.D. Crary, Stain Technol. 37:124,1962.

NUMBER 00091
Pesic, N.
Radotic, M.
Hajdukovic, S.
Erythropoietin Production Following Gamma Irradiation and Hemorrhage in Dogs.
Science 143:49-50,1964.
The production of erythropoietin in dogs increased after they had been exposed to 300 rad of gamma rays and then subjected to hemorrhage.

NUMBER 00092
Meier, H.
Gourley, G.
Basophilic (Myelocyte) or Mast Cell Leukemia in a cat.
J.A.V.M.A. p.33-40,Jan.1,1957.
A diagnosis of chronic basophil myelocyte or mast cell leukemia in a cat was established by neoplastic occurrence of mast cells in various organs including the bone marrow. Although there was a slight, but definite, increase in the number of basophils in the peripheral blood, it presented only a faint reflection of the extensive organ infiltration by mast cells. From the excess of neoplastic changes, predominately involving the spleen, liver, and lymph nodes, an autochthonous leukemic change was favored over a metastatic leukemic deposition by malignant blood cells from the bone marrow, which revealed only a comparatively scant involvement. Lack of extensive myelophthisis

accounted for the absence of severe anemia and extramedullary erythropoiesis. Without taking into consideration the specific cell predominantly involved, particularly in the tissues, the diagnosis of a myelogenous type of leukemia was suggested by marked myeloid splenomegaly, visible infiltration of the liver, and grossly absent, or only slight, lymphadenopathy.

NUMBER 00093
Geisler, C.D.
Rhode, W.S.
Hazelton, D.W.
Responses of Inferior Colliculus Neurons in the Cat to Binaural Acoustic Stimuli Having Wide-band Spectra.
J.Neurophysiol. 32:960-974,1969.

NUMBER 00094
Corbin, J.E.
Mohrman, R.K.
Wilcke, H.L.
Purebred Dogs in Nutrition Research.
Proc.Anim.Care Panel 12(4):163-168,1962.
Growth curves, litter size, and mortality rates are described for a colony of purebred English Setters. Weaning rate is nearly 90%, and most of the mortality occurs in the first week of life.

NUMBER 00095
Andersen, A.C.
McKelvie, D.H.
Long-term Experiments in Relation to Treatment Effects: Radiobiological and Gerontological Problems.
Proc.Anim.Care Panel 12(4):170-182,1962.
The success of a long-term experiment is unique in that psychological, physiological, and animal-husbandry factors play an intricate role. The veterinarian is challenged toward a balance of enviromental factors rather upon medicinal agents. Dogs with desirable genotypic and phenotypic traits are required for life-span studies; yet their availability is extremely limited. Gerontological processes can be assayed only after optimum kennel enviromental factors have been determined. Current knowledge in aging processes merely hints at underlying mechanisms; the researcher in a large kennel is obliged to observe keenly the record subjectively. Radiation must be considered only as a single force or stress that may affect the aging processes. Parental selection can improve breeding-colony production. Dams whelping 4-6 pups per litter have a minimum (17%) puppy losses to the weaning age. Beagle reproduction should ave. 1.45 pups /dam per 100-day breeding period. The most practical means of restraining dogs in a large kennel is with outdoor pens of proper design. Normal beagles can be raised and maintained to maturity in cages that allow companionship

and 12 sq.ft. per dog. Inside cages have been designed for the safe administration of hazardous radionuclides. Normal values (baseline data) obtained from dogs kept under standard conditions are urgently required for future research.

NUMBER 00096

Anon.
Additional Information of the Use of Sorptive Dusts for the Control of Insects, Ticks and Mites.
Source unknown.
Details for the application of sorptive dusts for new and old buildings for the removal and prevention of insects, ticks and mites.

NUMBER 00097

Lindsay, F.E.F.
Skeletal Abnormalities of a Cat Thorax.
Br.Vet.J. 124:306-307,1968.
The bony thorax of an adult cat was found to have 14 thoracic vertebrae, 14 pairs of ribs & 9 sternebrae. Some observations are made on the embryological and clinical significance of the extra elements.

NUMBER 00098

Varga, J.M.
Ceska, M.
Characterization of Allergen Extracts by Polyacrylamide Gel Isoelectrofocusing and Radioimmunosorbent Allergen Assay. II. Dog and Cat Allergens.
Int.Arch.Allergy 42:438-453,1972.
The potency of commercial dog and cat allergen extracts produced by different firms may vary by a factor which may range from several 100 to more than 1,000. In cat extracts, major common components can be demonstrated between pI 4.5-5.0. In addition to these, additional components were seen in the pI ranges 3.0-3.9; 5.3; and 7.5-8.5. In commercial dog extracts, major common components were detected between pI 4.3-4.7. In one dog extract, the presence of additional components with pI 3.0-3.4; 3.5-3.7; 3.9-4.1; 4.9-5.0; 5.1 and 5.2-5.3 was demonstrated. There are indications, that in the sera of allergic patients, IgE antibodies are present which are counterparts of breed-specific allergens.

NUMBER 00099

Harris, W.H.
Haywood, E.A.
Lavorgna, J.
Hamblen, D.L.
Spatial and Temporal Variations in Cortical Bone Formation in Dogs.

J.Bone & Joint Surg. 50-A(6):1118-1128,1968.
Prolonged studies of the rate of bone formation in 3 adult dogs using double tetracycline labeling (two 12-week periods of labeling 12 weeks apart) are reported. These studies, covering 24 weeks in a 36 week period, provided the first long-duration, direct measurements of rates of cortical bone formation. The double labelling also permitted evaluation of the variations in the rate of bone formation with respect to time and space. Spatial and temporal variations in skeletal metabolic activity are marked. The data presented are compatible with the hypothesis that cortical new-bone formation in 1 long bone of an adult dog, measured over 6 months, is representative of cortical-bone growth in long bones in that animal. Studies of porosity showed highly significant differences between dogs, between sites, and between different long bones, but no significant differences between sides in the same dog or between ribs. Ribs differ slightly from long bones in metabolic activity, not only in the rate of new-bone formation, but also in the amount of variability in rate of formation and in porosity. The rate of bone formation derived from this study indicate that the over-all annual rate of cortical bone formation in the long bones varied from 5-11% in 3 mature adult dogs, and that the over-all average cortical bone formation for ribs in these same three dogs varied from 14-44%.

NUMBER 00100

Dekaban, A.S.
Abnormalities in Children Exposed to X-Radiation During Various Stages of Gestation: Tentative Timetable of Radiation Injury to the Human Fetus, Part I.
J.Nuclear Med. 9(9):471-477,1968.
Severe and obvious abnormalities encountered in 26 children who received heavy x-radiation during various stages of gestation were compiled and evaluated. A tentative timetable for man is presented which correlates specific types of abnormalities with irradiation during particular stages of gestation when the dose is in the range of therapeutic irradiation.

NUMBER 00101

Bussolati, G.
Canese, M.G.
Electron Microscopical Identification of the Immunofluorescent Gastrin Cells in the Cat Pyloric Mucosa.
Histochemie 29:198-206,1972.
To solve the unsettled problem of the identification of the gastrin cells, a study has been undertaken on the electron microscopical characteristics of the gastrin-containing cells of the cat pyloric mucosa. Cells which, on semithin sections, were shown by an immunofluorescence method to contain gastrin, have been identified on serial ultrathin sections. The

ultrastructural features of these cells are those which have been described as characteristic of the G cells of the antropyloric mucosa. Other non-entero-chromaffin endocrine cells, which have been recognized as the D cells of the gastro-intestinal mucosa, did not result to contain gastrin.

NUMBER 00102
Michelbacher, A.E.
Furman, D.P.
Davis, C.S.
Swift, J.E.
Tarshis, I.B.
Control of Household Insects and Related Pests.
Circular 498, California Agricultural Extension Serv., Univ. of California, 1961.
A 40 page pamphlet describing some 177 household pests, ectoparasites and insects. Pictures and treatment for their removal for each of the insects is given.

NUMBER 00103
Johnson, F.R.
McMinn, R.M.H.
Microscopic Structure of the Pyloric Epithelium of the Cat.
J.Anat. (London) 107:67-86,1970.

NUMBER 00104
Kawabata, M.
Ray, R.D.
Experimental Study of Peripheral Circulation and Bone Growth. Part IV. Blood Flow Distal to Iliac Arteriovenous Fistula.
Clin.Orthop.Related Research (55):177-189,1967.
The hemodynamic changes distal to iliac arterivenous fistulae were studied by angiography. The blood-flow of the femur was measured by a technic based on the Fick principle. The blood volumes of the bones and the various soft tissues were also determined. Three venous collateral systems developed, all of which had their origin at the level of the knee. The lymphatic vessels were found to be dilated, and there was increased bone blood volume and rate of flow on the affected side. The values for femoral bone-blood-flow, blood volume and venous pCO2 were increased, suggesting the presence of venostasis in the bone. However, a linear relationship between the increased flow and bony overgrowth could not be demonstrated.

NUMBER 00105
Vassallo, G.
Solcia, E.

Capella, C.
Light and Electron Microscopic Identification of Several Types of Endocrine Cells in the Gastro-intestinal Mucosa of the Cat.
Z.Zellforsch. 98:333-356,1969.

NUMBER 00106
705
Rugh, R.
The Impact of Ionizing Radiations on the embryo and Fetus.
Amer.J.Roentgen.Radium Therap. Nucl.Med. 89(1):182-190,1963.
During the 1st trimester in the rodent (0-7 days), corresponding to the human embryo of the 1st 3 weeks, the rodent embryo is at its most sensitive stage in terms of dose and lethality, but not of anomaly production. The period of highest incidence of anomaly produced by ionizing radiations is about 8-11 days in the mouse and probably 20-30 days in the human. Following the completion of organogenesis in the embryo, ionizing radiations produce effects at the tissue and cellular level rather than at the organ level, so that gross congenital anomalies are not to be expected. Fractionation of exposure lowers the incidence of particular anomalies but such embryos present a greater variety of anomalies due to insult at successive periods of critical sensitivities of different developing organ systems. Since the embryo is a mosaic of differentiating centers, changing moment by moment, one cannot predict the results of x-irradiation insult. The basic effect of x-irradiation is the killing, or damaging, beyond recovery of the sensitive embryonic building blocks. Radiation-produced congenital anomalies should be regarded as expressions of loss or failure of certain structures to develop, rather than to the appearance of additional, new and grotesque structures. A radiation-damaged abnormal nucleus prevents the synthesis of specific proteins from free amino acids and thereby prevents normal morphogenesis, when the cell is allowed to survive.

NUMBER 00107
Daniel, J.C., Jr.
Comparison of Electrophoretic Patterns of Uterine Fluid From Rabbits and Mammals Having Delayed Implantation.
Comp.Biochem.Physiol. 24:297-299,1968.
1. Uterine fluids of a variety of mammals having delayed implantation were analyzed by acrylamide gel electrophoresis and compared to those of the rabbit where implantation is not delayed. 2. The uterine fluids of the rabbit taken between the fourth and ninth days post coitum show the presence of a protein-band which is absent during the first 3 days of pregnancy and in the non-pregnant uterus. 3. This same band is absent in the

electrophoretic pattern of serum taken from the same animals. 4. A similar phenomenon is absent in the northern fur seal, armadillo and laboratory rat but may be present in low concentration in the mink. 5. An hypothesis is presented which suggests that this protein is related to the rapid growth phase of blastocysts.

NUMBER 00108
Okishi, S.
Murata, Y.
Experimental Studies on Ancylostomiasis in Cats. I. Ancylostoma Caninum Ercolani, 1859, and A. Tubaeforme Zeder, 1800 Found in Cats in Japan.
Jap.J.Vet.Sci. 28:287-295,1966.
As a result of examination of cats for hookworms and morphological studies on hookworms detected from cats and dogs in Japan, the following points were clarified. 1. Hookworms were found in 11, or 8.1 per cent, of cats examined. This result suggests that hookworm infestation may be considerably important for cats in Japan. 2. Two species, Ancylostoma caninum ERCOLANI, 1859 and Ancylostoma tubaeforme ZEDER, 1800, were obtained from the 11 cats. The former was from 2 cats at the Veterinary Hospital, University of Tokyo, and the latter from 9 cats kept in Tokyo, Chiba, Kanagawa, and Hyogo Prefectures. Consequently, it is thought that the two species are distributed in many parts of Japan, and that the former is found rarely and the latter mainly in cats. 3. A. tubaeforme and A. caninum from dogs and cats were compared. A. tubaeforme differed clearly from A. caninum in the following aspects: its longer spicules, shorter gubernaculum, thicker cuticle, and shorter esophagus of the female, peculiar form of the cervical papillae and prebursal papillae, and deeper notches of the spicules. 4. As a result of comparison of the measurements and bibliographical consideration, the authors think that A. caninum var. longespiculata and Ancylostoma longespiculatum MONNIG, 1938 may be synonyms of A. tubaeforme. 5. A. caninum derived from cats was smaller in body size, and its egg was more slender in form than A. caninum from dogs and A. tubaeforme and their eggs.

NUMBER 00109
Jepson, S.L.
A Case of Superfetation in a Cat.
Am.J.Obstet. 16:1056-1057,1883.
A report by a physician on his observation of a possible case of superfetation in a cat, in a letter.

NUMBER 00110
Currey, J.D.
The Failure of Exoskeletons and Endoskeletons.
J.Morphol. 123(1):1-16,1967.

A theoretical analysis is made of the mechanical advantages of exoskeletons and endoskeletons. More complicated and realistic loading systems are considered than have been by previous authors. For all cases involving static loading, an exoskeleton would seem to be advantageous, but sometimes the advantage is quite small. If impact is considered, the advantage of exoskeletons becomes very much reduced, even on theoretical calculations; and it is likely that in life the advantage may be converted to a disadvantage, particularly in large active animals such as vertebrates.

NUMBER 00111
Thurn, C.
(Postnatal Development of the Stellate Ganglion of the Cat.)
Z.Anat.Entwickl-Gesch. 136:59-72,1972.
The postnatal development of the stellate ganglion was studied in cats aged from 1 day to 6 years and fixed by perfusion with Bouin's fluid from the aorta. The following quantitive findings were obtained: 1. The number of nerve cells per unit volume decreases from the 2nd week after birth. This decrease in number is attributed to the rapid growth of the neuronal elements and to an increase in the number of non-neuronal cells. From the 3rd month, the number of nerve cells remains constant. 2. The number of glial cells per unit volume increases during the first two weeks after birth to roughly twice the number noted at birth. During this period numerous mitoses are found. After reaching a maximum at about 15 days, the cell-density decreases up to the age of 1 year. During postnatal development of the stellate ganglion the following histological changes were observed: 1. Growth of the nerve cells is accompanied by structural changes of the nucleus and perikaryon. In the cytoplasm of the nerve cells autofluorescent granules appear in cats aged about 1 year. 2. The first myelin sheaths appear on the 8th day. 3. During the first few months, the interstitial connective tissue is poorly developed. 4. Mast cells are found at every stage of the postnatal development.

NUMBER 00112
Okoshi, S.
Murata, Y.
Experimental Studies on Ancylostomiasis in Cats II. Morphology of Eggs and Larvae of Ancylostoma Tubaeforme Zeder, 1800 and Ancylostoma Caninum Ercolani, 1859.
Jap.J.Vet.Sci, 29:133-140,1967.
Eggs and larvae were compared among Ancylostoma tubaeforme, A. caninum from cats, and A. caninum from dogs. As a result, the following points were clarified. 1. The ellipsoidal figure of the egg of A. caninum from naturally infected (n.i.) cats was more slender than that of the egg of A. tubaeforme. A.

significant difference was recognized in the ratio of length to width (l/w) of the egg between A. caninum from n.i. cats (1.80+/-0.15) and A. tubaeforme (1.56+/-0.12). 2. The ellipsoidal figure of the egg of A. caninum from dogs was very similar to that of the eggs of A. tubaeforme. The ratio l/w of the egg of A. caninum from dogs was 1.64+/-0.11, and its deviation from that (1.56+/-0.12) of the egg of A. tubaeforme was negligible. 3. Eggs of A. caninum from dogs took a more slender ellipsoidal shape when they were harbored by a cat due to artificial infection, than when they were collected from a dog. The transformed figure and the ratio l/w (1.84+/-0.14) of the egg of A. caninum from artificially infected cats almost corresponded to those of the egg of A. caninum from n.i. cats. 4. Morphological differentiation was impossible between A. tubaeforme and A. caninum during the larval stage.

NUMBER 00113

Hart, B.L.
Sexual Reflexes and Mating Behavior in the Male Dog.
J.Comp.Physiol.Psychol. 64(3):388-399,1967.

Appetitive behavior and copulatory responses which characterize the mating behavior of male dogs (beagles) were studied in detail. 4 different sexual reflexes exhibited by spinal male beagles were compared to relevant aspects of the mating behavior. It was concluded that some aspects of mating behavior, particularly the intense ejaculatory reaction (IER) and the copulatory lock, are probably completely mediated at the spinal level and the sexual refractory period is partially a reflection of refractoriness of spinal elements. Evidence is presented to support the hypothesis that the IER, which appears to be normally inhibited by supraspinal structures, is facilitated by neural disinhibition rather than neural excitation during sexual excitement.

NUMBER 00114

Elfvin, L.
The Ultrastructure of the Superior Cervical Sympathetic Ganglion of the Cat.
J.Ultrastructure Res. 8:403-440,1963.

NUMBER 00115

Anon.
Prodox-veterinary: an Oral Agent for Postponing Estrus in the Bitch.
Upjohn Co., Kalamazoo, Mich.

Mainly promotional for the Prodox product, but includes excellent photos of vaginal smears and schematics and graphs of the bitch's reproductive cycle.

NUMBER 00116
Okoshi, S.
Murata, Y.
Experimental Studies on Ancylostomiasis in Cats. III. Egg Culture of Ancylostoma Tubaeforme Zeder, 1800 and Ancylostoma Caninum Ercolani, 1859.
Jap.J.Vet.Sci. 29:177-184,1967.

Eggs of Ancylostoma tubaeforme and A. caninum were incubated at such various temperatures as 37, 30, 25, 20 and 15 degree C. Hatched rhabditiform larvae were subsequently cultured to observe the course of transformation into filariform ones. The results are summarized as follows: 1. An optimum temperature for hatching of eggs and development of rhabditiform larvae into filariform ones was 20 degree C for A. tubaeforme, and 30 degree C for A. caninum, showing a difference of ten centigrades between these two species. 2. Eggs of both A. tubaeforme and A. caninum could hatch out in water with no feces provided.

NUMBER 00117
Miller, S.A.
Dymsza, H.A.
Artificial Feeding of Neonatal Rats.
Science 141(3580):517-518,1963.

Newborn rats, fed either cow's milk or rat's milk by tube, developed a "bloat" and the time required for emptying the stomach increased. When these animals were allowed to suckle on nonlactating foster mothers, no evidence of this syndrome was observed. Based on these observations, a technique was developed for the artificial feeding of newborn rats. When the diet was rat's milk, growth equivalent to that of animals fed solely by lactating females was obtained. A diet of cow's milk did not support adequate growth.

NUMBER 00118
Sances, A., Jr.
Larson, S.J.
Jacobs, J.E.
Electronarcosis and Evoked Cortical Responses.
Science 141(3582):733-735,1963.

Evoked response data and electrocorticograms were recorded in macaque monkeys under the influence of electronarcosis currents sufficient to render the animals unresponsive to peripheral nerve stimulation. The data were obtained from chronically implanted electrodes in the sensory cortex as well as depth electrodes directed to thalamic and reticular loci. At the levels of current used, the amplitude characteristics of the evoked response data were not appreciably modified.

NUMBER 00119
Beach, F.A.
LeBoeuf, B.J.

Coital Behaviour in Dogs. I. Preferential Mating in the Bitch.
Anim.Behav. 15:546-558,1967.
Five male and five female beagles were raised together from puppyhood in a large field and were tested for copulatory behaviour when the females came into oestrus. Mating tests were repeated 8 to 13 months later during a second oestrous period. Females exhibited clear-cut preferences for particular males as sexual partners. Feminine rejection behaviour ranged from simple avoidance to active attack. Some females were more selective than others, but all showed discriminatory responses. Some males were rarely rejected by any bitch, whereas others were generally unpopular. It is suggested that any concept of sexual receptivity as an endogenously controlled condition leading to indiscriminated acceptance of all conspecific masculine partners must be evaluated separately for each species. The absence of preferential responsiveness on the part of the females should not be assumed a priori. Its existence or nonexistence can be established only by direct investigation.

NUMBER 00120
Ader, R.
Conklin, P.M.
Handling of Pregnant Rats: Effects on Emotionality of Their Offspring.
Science 142(3590):411-412,1963.
Pregnant rats were either unmanipulated or were handled for 10 minutes three times daily throughout pregnancy. Offspring remained with their natural mothers or were crossfostered within and between experimental and control groups. When tested at 45 and 100 days of age, the offspring of handled mothers were found to be generally less emotional than the controls.

NUMBER 00121
Pitts, G.C.
Hollifield, G.
Fatness of the Total Body as Estimated From Measurements on the Eviscerated Carcass.
Science 141(3582):718-719,1963.
In mice of the genetically obese strain with body fatness below 28 percent, fatness of the eviscerated carcass equaled fatness of the total body. Above 28 percent, the two values diverged with the eviscerated carcass being the higher. In the fattest individuals the prediction of total body fatness from measurements made on the eviscerated carcass may be in error by +6.5 percent-fatness. When total body fatness exceeded about 25 percent, visceral depots no longer participated proportionately, and probably did not participate at all in further fat accretion.

NUMBER 00122
Anon.
Care is Urged in Phosphorus, Calcium Ratio.
Vet.Dispatch 7(1):5,1965.
Dr. L.P.Krook advised practitioners on the perils of excessive phosphorus feeding (in the form of meat-only diets). The body compensates for hypocalcemia by increasing resorption of bone, resulting in generalized fibrous osteodystrophy. Swelling of facial and gnathic bones, lameness and fractures then occur.

NUMBER 00123
Johnson, S.E.
An Experimental Study of the Sacral Sympathetic Trunk of the Cat with Special Reference to the Occurence of Intrinsic Comissural Neurons.
J.Comp.Neurol. 33:85-104,1921.

NUMBER 00124
Clarkson, M.R.
Diseases of Animals Acquired From Man - Development of Protective Measures.
The Pract.Vet. 37(2):36-40,1965. (Pitman-Moore).
General discussion of the public health aspects of food-producing animals.

NUMBER 00125
Sjoqvist, F.
A Cytomorphological Study of Cholinesterase in Sympathetic Ganglia of the Cat.
Acta.Morph.Neerl.Scand. 5:140-162,1962.

NUMBER 00126
Sotgiu, M.L.
Cesa-Bianci, M.F.
Thalamic and Cerebellar Influence on Single Units of the Cat Cuneate Nucleus.
Exptl.Neurol. 34:394-408,1972.
The activity of single units was extracellularly recorded from cuneate nucleus in cats anesthetized with Nembutal. Stimulation by trains of four impulses, 300/sec, of nonspecific thalamic nuclei and cerebellar fastigial nuclei could modify the spontaneous and evoked activity of both interneurons and relay cells. The peripherally evoked and spontaneous activity of CTR neurons were depressed for 150-200 msec after thalamic and cerebellar stimuli in, respectively, 40 and 30% of the cells while the antdromic lemniscal potential was never affected by these stimuli. Both excitatory and inhibitory effects were detected on cuneate interneurons after thalamic and cerebellar stimulations. The nonspecific thalamic nuclei stimulation evoked potentials in 70% of the interneurons and the fastigial nuclei in 40%. Most of the

analyzed interneurons showed a characteristic convergence of peripheral and central (cortical, thalamic, reticular, cerebellar) excitatory and inhibitory effects. In interaction experiments both cerebellar and thalamic (conditioning) stimuli could inhibit the activity evoked by different test (cortical, Eticular, and peripheral nerves) stimuli, at intervals of 10-200 msec. Inhibitory effects between cerebellar and thalamic stimulations were also observ ed. These results show that both nonspecific thalamus and cerebellum presynaptically control the sensory cuneate nucleus transmission through the effect exerted on the cuneate interneurons. This effect is considered to be mediated by the brain stem reticular formation.

NUMBER 00127

Andrewes, C.H.
Viruses of Vertebrates, Williams and Wilkins Co., Baltimore, 1964.
An outline of morphological and other characteristics of vertebrate viruses. Those for the cat include panleukopenia, feline virus rhinotracheitis, feline pneumonitis and others.

NUMBER 00128

Belcher, E.H.
Berlin, N.I.
Eernisse, J.G.
Garby, L.
Glass, H.I.
Heimpel, H.
Lee, M.
Lewis, S.M.
McIntyre, P.
Mollison, P.L.
Najean, Y.
Szur, L.
Recommended Methods for Radioisotopic Erythrocyte Survival Studies.
Am.J.Clin.Path. 58(1):71-80,1972.
An Expert Panel on the Application of Radioisotopes in Hematology, of the International Committee for Standardization in Hematology, has published recommended methods for erythrocyte survival studies using radioisotopes. This document includes standard technics using "51-Cr" and radioactive di-isopropylphosphorofluoridate. It also contains proposals for presentation and analysis of the data and a table of elution correction factors for use when the erythrocyte survival study has been carried out with "51-Cr". The Panel has recommended that the use of a single index of T sub 50 Cr should be discontinued and in all cases the mean cell life should be deduced. The document contains recommendations concerning the use of radioisotope labelled erythrocytes in compatibility testing. Estimates of radiation dose associated with

erythrocyte survival studies are presented.

NUMBER 00129
Anon.
Floor Treatment Manual for Animal Hospitals.
Employees Training Committee, Amer.Anim.Hosp.Assoc.
An old-timer, and probably a lot of specifics are obsolete, but the basics are still very useful. Discusses resilient, concrete, ceramic tile, terrazzo and wood as floor surfaces, and thir renovation and daily maintenance.

NUMBER 00130
Evans, K.G.D.
Panel Addendum.
Mod.Vet.Pract. 46(2):25,1965.
In further response to your panel question on preventing transmission of infectious diseases among hospitalized cats, here in Great Britain, I follow this 8-point program. (1) Owners are encouraged whenever possible to have their cats immunized against feline infectious enteritis (panleukopenia) at an early age. (2) An autogenous vaccine prepared against feline infectious catarrh (rhinotrachetis) from material obtained from cats in our practice is also recommended. (3) Cats are hospitalized in tiled pens with metal doors on newspaper which can be renewed easily and destroyed. All corners are coved to facilitate removal of debris and to prevent accumulation of feces. Sawdust boxes are provided. (4) An extractor fan to insure circulation of fresh air switches on automatically. (5) All feeding trays are disposable; they are used once and then destroyed. Feeding trays are removed at night after a reasonable time has been allowed for feeding. (6) An electrically activated fly repellent is in use. (7) A newly vacated pen is sprayed with an antiseptic of approved value. It is then scrubbed with hot water and sodium hypochlorite, left to dry and then flamed with a butane gas flame gun. (8) Booster vaccination every 6 months is carried out with the autogenous vaccine, and at annual periods up to 4 or 5 years of age with the panleukopenia vaccine.

NUMBER 00131
Beadman, R.
Smith, R.N.
King, A.S.
title unknown.
Vet.Rec. 76(37):1005-1007,1964.
Osteophytes of the vertebrae of the cat usually occur near the disc and may be single or multiple. In some cases they may be so large as to bridge the intervertebral space. About 85% can be detected on routine lateral radiographs. In a postmortem study of 150 cats, this type

of spondylitis was detected in 65% of the animals. Although the growths do not involve the disc, they usually are located at the cranial or caudal end of the vertebra and sometimes at the costovertebral articulation. The thoracic vertebrae are most commonly affected, with the highest incidence at the 7th and 8th. The lesions are less common in the lumbar and cervical bones. In the thoracic bones, the area caudal to the disc is most commonly affected, whereas in the lumbar region, the part cranial to the disc is involved most frequently. The bony outgrowths have not been found in the 1st or 2nd cervical vertebrae. The etiology of the lesion is unknown, but it has been suggested that it may be related to trauma, particularly falls from considerable heights.

NUMBER 00132
Jackson, C.M.
On the Prenatal Growth of the Human Body and the Relative Growth of the Various Organs and Parts.
Amer.J.Anat. 9:119-165,1909.
Anatomical measurements and weights of embryos and fetuses of man. Charts, graphs and tables galore. Weights are by volume estimations.

NUMBER 00133
Monroy, A.
Chemistry and Physiology of Fertilization.
Holt, Rinehart and Winston, N.Y.
An excellent review, under the following chapter titles: The interaction between eggs and spermatozoa; The penetration of the spermatozoon; The egg cell membrane; Surface changes, activation of the egg, and formation of the zygote nucleus; The metabolic study of fertilization. Includes 25 pages of referenced titles.

NUMBER 00134
Leighton, F L.
Common Cat Diseases.
Veterinary Scope 4(2):3-8,17-25,1959.
A comprehensive, but short, review of the commonly seen cat clinical problems.

NUMBER 00135
Piermattei, D.L.
Gowing, G.M.
Pleuritis in the Cat.
Mod.Vet.Pract. 45(10):55-58,1964.
One of the common causes of dyspnea in the cat, and may be clinically manifested as dry or fibrinous, serofibrinous or effusive, or purulent type of pleuritis. All forms start as dry pleuritis and when the process stops is a function of the cause. Thus, the form

in any particular case is result of the cause and the time elapsed since the process began.

NUMBER 00136

Ward, J.M.
Wright, J.F.
Nelson, N.S.
Berman, E.
Liddle, C.G.
Hellman, A.
Bone and Soft-Tissue Neoplasms in Cats Exposed to Radiostrontium.
J.Nat.Cancer Inst. 48:1543-1546,1972.

Four neoplasms of bone and soft tissues adjacent to bone developed in three cats from 274-609 days after initial oral administration of strontium-89. Neoplasms included a giant cell tumor, osteosarcoma, hemangiosarcoma, and fibrosarcoma. Cumulative dose to the skeleton of each cat varied from 1700-4850 rads. Feline leukemia virus was not detected in the neoplasms by a complement fixation test or ultrastructural examination. Comparative aspects of radionuclide carcinogenesis are discussed.

NUMBER 00137

Fishler, J.J.
Feline Medicine.
Mod.Vet.Pract., p.38,1964.

The cat's hemopoietic system does not respond to stress as easily as that of dogs, and blood transfusions often will facilitate recovery from many disease conditions; in some cases they are lifesaving. Since multiple transfusions are usually indicated, however, surplus citrate in stored blood may tie up serum calcium and lead to convulsions. Thus, fresh blood is preferred for transfusions; about 25 cc initially, and up to 4 to 5 additional 20-cc injections may be required. Since about 30 cc can be withdrawn at a time, 4 or 5 donors should be maintained. Blood is withdrawn from the heart; occasionally a donor may be lost from hemorrhage into the pericardium. If syringe and needles are silicone-coated, no preservative is necessary for blood injected within 20 minutes after it is drawn. Healthy cats will tolerate i.p. injections of blood, but hematomas are commonly found after i.p. administration in ill cats; i.v. administration is preferred and is not difficult. Heparin should not be used as an anticoagulant as some cats do not tolerate it. Usually the hematocrit will be informative enough, so RBC counts are not necessary. Transfusions should be based on clinical conditions rather than a predetermined RBC level. In emergencies dog blood can be used safely for cats, but the red cells do not live long and hematuria is observed within 24 hours. The anesthetic preferred for cats is thiamylal sodium (Surital: Parke-Davis) i.v.; too rapid administration will often cause apnea, but this can be corrected by pushing a fingertip against the soft palate, causing the animal to gasp. Anesthetics or other agents should not be given by intrathoracic injection; in nearly all instances the lungs are punctured, and in 35 of 43 animals pulmonary injury was observed at necropsy after intrathoracic injection of various anesthetics. Also, the injection is painful and more restraint is required than for i.v. use. Some cats have a complete mediastinum and thus fluids may accumulate on one side. Pyothorax is a common sequel to many respiratory conditions and frequent drainage is indicated; the site for puncture is low on the 7th intercostal space (5th from rear). In rupture of the thoracic duct, chyle or serous fluid accumulates in the thorax; ligation of the duct is required. If cats are brought in with sore mouths, check to see if a quaternary ammonium compound is being sold locally as a disinfectant; mouth lesions will occur if the cat licks areas to which the compound has been applied in concentrations of more than 0.5%.

NUMBER 00138
Howell, J.M.
Pickering, C.M.
Title unknown.
J.Comp.Path. 74(3):280-285,1964.

Calcification of the adrenal glands occurs much more commonly in the cat than in the dog. When the adrenal glands from 23 of 28 cats necropsied during a 16-month period were examined for calcification, calcium deposits were found in the glands from 7 (30.4%) of the 23 cats. In 2 cases the changes were evident on macrosopic examination but in the others they were evident only when examined microscopically. In 6 of the 7 cases the lesions were of limited extent, and in 2 cats calcium deposits were present in only one adrenal gland. The lesions did not appear to play an important part in the immediate clinical state of the animal in any case. The process appeared to be one of dystrophic calcification, with calcium salts being deposited in dead or dying cells.

NUMBER 00139
Blakemore, J.C.
Clinical Hematology for the Practitioner: Part II.
Mod.Vet.Pract. p.46-51,1963.

This article is the second in a three part series, dealing with those hematologic technics which are particularly suited to the needs of the practitioner. In this article, he describes the various tests available in this area, tells how to avoid common errors in their use, and discusses some of the information the tests can provide the practitioner.

NUMBER 00140
Case, M.T.
Simon, J.

Whole-Body Gamma Irradiation of Newborn Pigs: Pathologic Changes.
Am.J.Vet.Res. 33(6):1223-1230,1972.
Newborn Yorkshire pigs were exposed to 150, 250, 300, 350, 375, 400, and 450 r of 60-Co gamma radiation. Hemorrhage was the principal lesion in the pigs which died 10 to 29 days after exposure to lethal doses of radiation (350, 375, 400, and 450 R). Hemorrhages were always found in the heart, lymph nodes, and skin and were often present in skeletal muscle, intestine, kidney, and brain. Hemopericardium, hemoperitoneum, or hemorrhage into the intestinal lumen were often severe enough to cause death. Destruction of hematopoietic cells occurred in lymph nodes, Peyer's patches, spleen, and bone marrow. Peyer's patches and bone marrow returned to histologic normalcy more rapidly than did lymph nodes and spleen. Radiation pneumonitis developed in the irradiated pigs and was most severe at 35 days after irradiation.

NUMBER 00141
Case, M.T.
Simon, J.
Whole-Body Gamma Irradiation of Newborn Pigs: The LD 50/30.
Am.J.Vet.Res. 31:113-115,1970.

NUMBER 00142
Anon.
A Selected List of Normal Values.
Abbott Labs., N.Chicago, Ill., 1961.
A pocket-sized card with normal values for man for lab tests on blood, urine and some other tests.

NUMBER 00143
Westweber, J.G.
Kruckenberg, S.M.
The Effect of Selected Organophosphorous Compounds on Plasma and Red Blood Cell Cholinesterase in the Dog.
Vet.Med/Small Anim.Clin. p.803-806,1972.
Six common medicinal organophosphorous (OP) compounds used singly or in combination, depressed plasma cholinesterase (ChE) sooner than red blood cell (RBC) ChE. After treatment, pretreatment plasma ChE activities were reestablished in less time than were pretreatment RBC ChE activities. An equilibrium above zero was established for the ChE activity in dogs exposed to repeated therapeutic doses of OP compounds. After treatment with many of the compounds ended, ChE activity rebounded above pretreatment levels. Combinations of OP compounds had no additive effect on the depression of ChE activity.

NUMBER 00144
Ward, F.P.
Glicksberg, C.L.
Effects of Dichloruos on Blood Cholinesterase Activity in Dogs.
J.A.V.M.A. 158:457-461,1971.

NUMBER 00145
Kirk, R.W.
Canine Pediatrics.
Presented at Ann.Meet.Ohio V.M.A., Columbus, 1964.
An outline of the presentation, including a number of good hints.

NUMBER 00146
Gagov, S.
Petrov, L.
Natschev, T.
(The Vascular Effect of Mechanical Vibrations in the Cat Hind Limb.)
Res.Exp.Med. 157:37-46,1972.
In 25 experiments the effects of high frequency vibrational stress (M.V.) on total vascular resistance in the autoperfused cat hind limb was studied by local application of mechanical sine wave oscillations (100 Hz; 0.4 mm amplitude) for 60 min duration. The experiments were performed by recording a limb blood flow and arterial perfusion, after ganglion blockade (10-15 mg/kg b. w. Pendiomid), after complete limb denervation and during i.v. infusion of L-noradrenaline (4 micrograms/min). In addition the induced changes of limb vascular resistance by a short time elevation of perfusion pressure (50-60 mm Hg) were tested before and during the M.V. period. By M.V. a definite increase of local vascular resistance regularly could be produced in the vibrated limb within about 50 min, perfusion pressure as well systemic arterial pressure generally being constant. An almost identical response pattern was observed in the denervated limb as well as after pendiomid. By a transitory elevation of perfusion pressure the M.V. constriction could be reversibly eliminated. If applied during a sustained increase of vascular resistance (noradrenaline infusion), M.V. was without effect. The experimental results are consistent with the assumption, that prolonged M.V. stress is followed by a localized diminution of limb blood flow, which is probably due to a substantial elevation of myogenic basal tone of the resistance vessels.

NUMBER 00147
Hobson, J.A.
A Method of Head Restraint for Cats.
Electroencephal.Clin.Neurophysiol. 32:443-444,1972.
A method for head and body restraint is described which allows long-term micro-electrode recording of

pontomedullary brain-stem units of cats. Mechanical restraint is achieved by securing bolts projecting from a headplate to a steel arch in a box. Adaptation to the box is enhanced by the strategic use of sleep deprivation.

NUMBER 00148
Kirpekar, S.M.
Prat, J.C.
Puig, M.
Wakade, A.R.
Modification of the Evoked Release of Noradrenaline from the Perfused Cat Spleen by Various Ions and Agents.
J.Physiol. 221:601-615,1972.
Cat spleens were perfused with Krebs-bicarbonate solution at a rate of about 7 ml./min at 33-35 degrees C. Noradrenaline release after splenic nerve stimulation at 10 or 30 Hz was measured. Effects of various ions and drugs on noradrenaline release were determined. Perfusion of phenoxybenzamine- and tritiated-noradrenaline-treated spleens with 1, 2.5 and 5 mm cobalt or nickel-2 Krebs solution markedly reduced the release of noradrenaline by nerve stimulation. Lanthanum was the most potent inhibitor of noradrenaline release. Increasing the calcium concentration or adding tetraethylammonium chloride (TEA) partially counteracted the inhibitory effects of cobalt on release. Cobalt did not inhibit release induced by tyramine. Calcium did not cause spontaneous release of noradrenaline either when high concentrations were injected directly into the spleen or after first perfusing the spleen with calcium-free medium. Carbachol, protoveratrine and high potassium inhibit, whereas TEA, barium and rubidium enhance, the evoked release of noradrenaline. The relation of noradrenaline release to influx of calcium ions and its modification by various agents has been discussed.

NUMBER 00149
Brown, G.L.
Gillespie, J.S.
The Output of Sympathetic Transmitter from the Spleen of the Cat.
J.Physiol. 138:81-102,1957.
Easily measururable and reproducible quantities of noradrenaline are released follow splenic nerve stimulation.

NUMBER 00150
Burgen, A.S.V.
Terroux, K.G.
On the Negative Inotropic Effect in the Cat's Auricle.
J.Physiol. 120:449-464,1953.
In the cat, acetylcholine or vagal stimulation shortens the cardiac action potential.

NUMBER 00151
Gillespie, J.S.
Kirpekar, S.M.
The Uptake and Release of Radioactive Noradrenaline by the Splenic Nerve of Cats.
J.Physiol. 187:51-68,1966.

NUMBER 00152
Pappas, A.M.
Experimental Congenital Malformations of the Motorskeletal System.
Clin.Orthop., No.59,1968.
The history of commonly acknowledged causes of experimental skeletal malformations, namely, hormones, drugs and chemicals, dietary factors, radiation, infectious agents and immunologic factors, have been reviewed, and the presumed mechanisms of teratogenesis discussed. The concept that teratogenic insults at graduated critical developmental periods result in a spectrum of skeletal abnormalities is emphasized; and the anatomic expression of the ultimate anomaly is dependent on the dose of the teratogenic agent and the stage of development. The closing section is an attempt to analyze critically the known genetic, intracellular, intercellular and metabolic mechanisms which result in the abnormalities of skeletal morphogenesis.

NUMBER 00153
Trotter, M.
Peterson, R.R.
Weight of Bone in the Fetus - A Preliminary Report.
Growth 32:83-90,1968.
The ossified portions of the skeleton from a series of eight White female, seven Negro male, and 14 Negro female fetuses were brought to a fat-free, dry state and weighed. In addition to age, weight of the body, and weight of the total bone, the other variables considered include the weights of the osseous humerus and femur and the lengths of their osseous diaphyses. On the assumption that the allometric growth relation holds for any two measurements of the fetus and that the relation of a measurement to age can be described by an exponential growth equation, these data were rectified accordingly by using logarithms for measurements of weight and length, but not for age. For each of the three sex-race groups the appropriate regression equations were fitted to give estimates of the relation of weight of the total bone to each of the other measurements and of each of the other measurements to age in weeks. The equations are found to be numerically similar in the three sex-race groups. As expected, even with these small sample sizes, the regression coefficients differed significantly from zero at the P = 0.05 level with the exception of the relation of

weight of the total bone to age in the White female group.

NUMBER 00154

Matthews, J.L.
Martin, J.H.
Collins, E.J.
Metabolism of Radioactive Calcium by Cartilage.
Clin.Ortop., No.58,1968.

Numerous investigators have employed autoradiography with isotopic calcium and phosphate to study the process of mineralization. Although autoradiography has contributed materially to our understanding of hard-tissue histophysiology, technical difficulties have limited the full realization of the information to be gained from the method. Recent advances in thinsectioning technics have produced autoradiograms with higher resolution. Electron autoradiographic studies of growth plates of 21-day-old albino rats given 45-Ca I.P. show a concentration of grains over the cells in the growth plate with an increase in grains over those cells in the immediate vicinity of the mineralization site. Later, grains were found in increasing amounts over the matrix in the mineralizing zones. The possible role of the cell as a modulator of calcification and an initiator of nucleation is proposed. Further work is in progress to assess the role of calcium and phosphate in mineralization.

NUMBER 00155

Scott, J.P.
Fuller, J.L.
Genetics of the Social Behavior of the Dog.
University of Chicago Press, 468 pages,1965.

In his review of this book in New Scientist 27:231,1965, P.L. Broadhurst writers: This is a considerable book describing the outcome of 13 years of research on the behavior of 5 dog breeds (wire-haired fox-terrier, American cocker-spaniel, Shetland sheep-dog, beagle and the African Basenji). The aims were to investigate these dogs' behavioral development, and to make crosses to assess the inheritance of behavioral characteristics among them. We shall long remain indebted to the authors for their veritable mine of information of good behavioral data.

NUMBER 00156

Kirpekar, S.M.
Dixon, W.
Prat, J.S.
Inhibitory Effect of Manganese on Norepinephrine Release From the Splenic Nerve of Cats.
J.Pharmacol.Exptl.Therap. 174:72-76,1970.

NUMBER 00157

Kirpekar, S.M.W

Wakade, A.R.
Release of Noradrenaline from the Cat Spleen by Potassium.
J.Physiol. 194:595-608,1968.

NUMBER 00158
Puig, M.
Wakade, A.R.
Kirpekar, S.M.
Inhibitory Effects of Cobalt, Nickel and Lathanum on Norepinephrine Release from the Cat Spleen and Their Reversal by Calcium.
Pharmacologist 13:229,1971.

NUMBER 00159
Stara, J.F.
Berman, E.
Secretion of 47Ca and 85Sr in the Saliva of Cats.
presented at the 11th Ann.Meet.Health Physics Soc., Houston, Texas, 6/66.

Strontium and calcium levels in saliva obtained by pilocarpine reflex stimulation of salivary flow were determined for growing and adult cats. These animals had been labelled by radioactive tracer in one of three distinct modes; single dose, chronic uptake, and homogeneously from conception. Saliva/plasma ratios are presented for each of the three groups. In the course of extended stimulation of the glands, two types of saliva are obtained - a serous followed by mucous type. At the time of collection from the chronic uptake group, the serous fraction had an average concentration equal to 0.015 per cent of body burden/ml and mucous saliva, 0.024 per cent/ml. Specific activities and observed ratios are reported for each experimental phase.

NUMBER 00160
Mitchell, B.
Anesthesia for Caesarean Section and Factors Influencing Mortality Rates of Bitches and Puppies.
Vet.Rec. 79(9):252-257,1966.

This publication discusses some factors which influence the survival rate of bitches and puppies following Caesarean section. From the case records of the 120 bitches included in the review of the nine-year period from October, 1956, to September, 1965, a total of 16 (13.3 per cent.) bitches died either during the operative procedure, or during the first five post-operative days. Records of the number of puppies surviving 24 hours following live delivery from 43 bitches, show a survival rate of 96.4 per cent. of puppies delivered from bitches which did not receive barbiturate anaesthesia compared with a survival rate of 63.8 per cent. of puppies delivered from bitches whose anaesthesia included a barbiturate. This difference is very highly significant. Recommendations on the choice of anaesthetic agents and techniques are made in the light of these findings.

NUMBER 00161

Morris, M.L.
Nutrition and Diet in Small Animal Medicine.
Mark Morris Associates, Denver, Colorado, 217 pages, 1960.

Besides providing fundamental information on the clinical application and use of Prescription Diet feeds, this booklet contains diverse clinical and research data on disease states, growth, colony facilities and others. It also contains 217 clinical and nutritional references.

NUMBER 00162

Ridgway, S.H.
McCormick, J.G.
Anesthetization of Porpoises for Major Surgery.
Science 158(3800):510-512,1967.

Comparison of three porpoises (Tursiops truncatus and Lagenorhynchus obliquidens) given nitrous oxide with 18 given halothane, with complete documentation of reflexes and comprehensive physiological monitoring, showed halothane to be a suitable anesthetic for major surgery while nitrous oxide was found to be inadequate. In addition, sodium thiopental administered intravenously was successfully used to facilitate intubation procedures. This development eliminated the need to intubate awake porpoises.

NUMBER 00163

Thoenen, H.
Haefely, W.
Staehelin, H.
Potentiation by Tetraethyl Ammonium of the Response of the Cat Spleen to Postganglionic Sympathetic Nerve Stimulation.
J.Pharmac.Exptl.Ther. 157:532-540,1967.

NUMBER 00164

Longley, W.H.
The Maturation of the Egg and Ovulation in the Domestic Cat.
Amer.J.Anat. 12(2):139-172,1911.

Maturation stages are found in greater numbers in the ovaries of sexually immature than in those of mature animals. Although eggs containing first or second polar spindles are found in the ovaries of sexually immature animals or in those of mature animals before copulation has occurred, maturation in all eggs which are destined to undergo a normal extra-ovarian development is dependent upon pairing. The best criterion for distinguishing the first and second polar spindles, apart from the presence of the first polar body, is the condition of the chromatin. The reduced number of chromosomes in the cat's egg is not less than fourteen. In preserved material the germinal vesicle of the full grown egg and the first and second polar spindles agree in being found at the periphery of the egg at either the protoplasmic or deutoplasmic pole or at any intermediate point. Two polar bodies are formed in all cases, the first in the ovary and the second in the Fallopian tube after the entrance of the sperm head into the egg. The first and second polar bodies can usually but not always be distinguished. Like the maturation of the egg, ovulation is dependent upon copulation and occurs about the end of the second day after pairing. The average number of eggs discharged at one ovulation is approximately four. There is no regular alternation in the functioning of the ovaries. If the young are removed within a day of birth the mother may pass through a second period of heat and be impregnated within three to four weeks. Very large numbers of spermatozoa may reach the Fallopian tube. There is a strongly marked tendency on their part to collect in the immediate neighborhood of the egg. Mallory's connective tissue stain is of approved utility in the study of degenerating eggs and follicles. Ovarian eggs may degenerate at any period of their development up to and including that in which they possess a first polar body and second polar spindle.

NUMBER 00165
Altman, N.H.
Melby, E.C.
Squire, R.A.
Intraerythrocytic Crystalloid Bodies in Cats.
Blood 39(6):801-803,1972.
Rectangular-shaped crystalloid bodies (C.B.) were demonstrated within the erythrocytes of intact and splenectomized cats and after incubation in hypertonic NaCl. The morphologic appearance of the C.B. is striking similar to that of crystals present in the erythrocytes of individuals with hemoglobin C.

NUMBER 00166
Lombardi, M.H.
Radioisotopic Blood Volume and Cardiac Output in Dogs.
Am.J.Vet.Res. 33(9):1825-1834,1972.
Twenty-eight apparently normal, anesthetized, mongrel dogs, obtained from the city pound of Oak Ridge were subjected to blood volume and cardiac output determinations, using iodine-131 albumin and chromium-51-tagged red blood cells. Plasma volumes and total volumes and total red blood cell volumes were determined by dilution. Cardiac outputs were estimated from the dilution curve recorded when a collimated

NaI(Tl) detector (gamma spectrometer-ratemeter-recorder) was positioned on the thoracic wall at the apex beat. Low packed cell volumes (35 +/- 5%) and normal blood volumes (75 +/- 6 ml./kg.) were observed in a group of 25 dogs. In agreement with this, circulating red blood cell volumes were low (24 +/- ml./kg.), and plasma volumes were relatively high (51 +/- 5 ml./kg.). True blood volumes could be estimated from plasma volumes when using 0.98 (trapped plasma) and 0.91 (total body/venous pcv ratio) corrections. Cardiac outputs determined in 24 dogs averaged 2.00 +/- 0.39 blood volumes/minute. Heart rates averaged 139 +/- 26 beats/minute, and cardiac indexes were 3.60 +/- 0.66 L./minute/sq.m of body surface. Two abnormal recordings were discussed as examples of circulatory deficiencies. Results were compared with those of previous reports, and the veterinary clinical use of the external counting method was discussed.

NUMBER 00167

Hodge, H.C.
Indra, J.
Drobeck, H.C.
Duprey, L.P.
Tainter, M.L.
Acute Oral Toxicity of Methylrosaniline Chloride.
Toxicol.Appl.Pharmacol. 22:1-5,1972.

Toxicity of single po doses of methylrosaniline chloride (gentian violet) given in solution or as powdered enteric coated tablet material was determined to be as follows per kg: mice LD50 1.2 g, rats LD50 1.0 g, dogs approximately 1 g, guinea pigs, rabbits and cats approximate lethal dose between 0.1 & 0.25 g. Death was accompanied by severe gastrointestinal irritation with water and electrolyte loss.

NUMBER 00168

Hafez, E.S.E.
The Behaviour of Domestic Animals.
Williams and Wilkins.
Co.,1962.

More than 600 pages which should be in the library, and read, of every animal researcher. The chapter on the cat is by J.S. Rosenblatt and T.C. Schneirla, and using their own knowledge and 99 references have shown a specific and comprehensive understanding of the cat.

NUMBER 00169

Busu Ray, B.N.
Booker, W.M.
Dutta, S.N.
Pradhan, S.N.
Effects of Microinjection of Ouabain into the Hypothalamus in Cats.

Br.J.Pharmac. 45:197-206,1972.
In cats anaesthetized with chloralose, repeated injections of 20 microgram ouabain were made either into the cerebral ventromedial nucleus of the hypothalamus (VMH), or intravenously whilst the elcetrocardiogram, arterial blood blood pressure and respiration were recorded. The injections produced cardiac arrhythmias preceded by sinus bradycardia, variable changes in arterial blood pressure and respiratory depression. Death occurred either from ventricular fibrillation or from cardiac arrest. The arrhythmias which occurred after the injections into the cerebral ventricles were not peripheral effects produced after absorption of the ouabain into the blood stream, because with intravenous injections larger amounts were required to produce the arrhythmias and to cause death than with intraventricular injections. The arrhythmias which resulted in death were due to an action on the VMH. With microinjections of ouabain into this region of the brain death occurred earlier and after smaller does than after intraventricular injections. While sinus bradycardia was abolished by bilateral vagotomy other cardiac arrhythmias were prevented by acute cardiac sympathectomy and cervical cord transection. Thus both the sympathetic and parasympathetic nervous systems appear to be involved in the production of these arrhythmias. Since some of the cardiac arrhythmias obtained with ouabain in anaesthetized cats resemble the cardiotoxic effects seen in clinical practice during treatment with digitalis glycosides it is concluded that these effects, too, are, at least in part, central in origin, caused by an action on the VMH and mediated mainly via the sympathetic nervous system.

NUMBER 00170
Fletcher, A.
Pradhan, S.N.
Responses to Microinjection of Dextro-tubocurarine into the Hypothalamus of Cats.
Int.J.Neuropharmac. 8:373-377,1969.

NUMBER 00171
Jasper, H.H.
Ajmone-Marsan, C.
Diencephalon of the Cat.
In: Electrical Stimulation of the Brain., ed. D.L. Sheer, Austin, Univ. of Texas, 1961.

NUMBER 00172
Nielsen, K.C.
Owman, C.
Control of Spontaneous Ventricular Fibrillation During Induced Hypothermia in Cats by Acute Cardiac Sympathectomy.
Acta Physiol.Scand. 76:73-81,1969.

Acute cardiac sympathectomy consists of bilateral removal of the stellate ganglia with portions of the cervical sympathetic trunks and superior cervical ganglia.

NUMBER 00173
Anon.
Identification and Record Keeping for Laboratory Animals.
Charles River Digest 4(3):1-4,1965.
Identification methods, especially useful for small rodents, include marking, ear punching, toe clipping, ear tags, tattooing, coat color registration. Breeding and other records are discussed.

NUMBER 00174
Schmidt-Nielsen, K.
Taylor, C.R.
Red Blood Cells: Why or Why Not?
Science 162(3850):274-275,1968.
It is commonly stated that, if hemoglobin were dissolved in the blood plasma rather than enclosed in corpuscles, the viscosity of the blood would be greatly increased. We found that when the corpuscles of dog or goat blood were disrupted with ultrasound, giving a solution with the same hemoglobin concentration, the relative viscosity was drastically reduced. It appears, therefore, that the existence of blood corpuscles does not contribute to a reduced viscosity of blood.

NUMBER 00175
Newberne, J.W.
Bittle, J.L.
Mayer, K.
Clinical Differentiation of Feline Viral Diseases.
Allied Vet. March-April,1959.
In feline panleukopenia the course is rapid and the mortality high, whereas in feline pneumonitis the course is prolonged and the mortality is generally low. These and other clinical differential characteristics are described. Available vaccines produce satisfactory immunity against these diseases. In addition, purely clinical evidence indicates that the feline pneumonitis vaccine may have some therapeutic effect. While feline pneumonitis is caused by a psittacoid viral agent, a number of immunologically different true viruses cause respiratory infections in cats which are clinically indistinguishable from pneumonitis. In some cases of clinical pneumonitis that were thoroughly studied, both feline pneumonitis virus and another respiratory virus were found to be involved. Such dual infections tended to be more severe and sometimes showed a high mortality. There was some evidence that vaccine control of the pneumonitis virus reduced the severity of such mixed outbreaks. Feline pneumonitis can be distinguished histopathologically and

immunologically from respiratory infections caused by other viruses.

NUMBER 00176

Smith, R.H.
Cullen, S.C.
Electronarcosis: A Progress Report.
Amer.J.Med.Electron. 1(5):308-313,1962.

Since electronarcosis in the form described is still in the crude trial and error stage, good controlled studies are going to have to be "hedged" well, with a full circuit of the generator, exact information on electrode composition and placement, specific descriptions of the pattern of current input, and all other minutae which might be important to anyone wishing to duplicate the work.

NUMBER 00177

Nagel, E.L.
Morgane, P.J.
McFarland, W.L.
Anesthesia for the Bottlenose Dolphin, Tursiops Truncatus.
Science 146:1591-1593,1964.

Anesthetics can be administered to the bottlenose dolphin, Tursiops truncatus, by means of special ventilating equipment and intubation techniques. Nitrous oxide has been administered successfully on six occasions, and has produced definite signs of anesthesia. These developments open the possibility of performing major surgery in this species for the first time.

NUMBER 00178

Konrad, K.W.
Bagshaw, M.
Effect of Novel Stimuli on Cats Reared in a Restricted Enviroment.
J.Comp.Physiol.Psychol. 70(1):157-164,1970.

Cats were reared in an experience-restricted environment until 7.5 mo. of age. Control littermates were reared normally. At 15 mo., subjects were tested in three situations involving novel stimuli. Restrictively reared cats were inhibited in normal exploratory behavior; they responded to physical restraint with marked passivity, and gave larger autonomic responses to brief tone stimuli. These findings support the notion that novelty has an unusually large impact on subjects reared in an experience-restricted environment.

NUMBER 00179

Cowie, D.M.
Calhoun, H.A.
The Presence of Calcium in the Red Blood Corpuscles of Ox and Man.

J.Biol.Chem. 37(3):505-509,1919.
The red blood corpuscles contain calcium, but in a somewhat smaller concentration than the serum.

NUMBER 00180
Weiner, D.J.
Bradley, R.E.
The Hemogram and Certain Serum Protein Fractions in Normal Beagle Dogs.
Vet.Med./Small Anim.Clin. 67(4):393-398,1972.
In preparation for experimental work on the dog heartworm Dirofilaria immitis, the first five weekly values for the hemogram and serum protein fractions were compared with values available in standard reference texts. Lack of agreement was found not only between the experimental values and published values, but between published values as well. Recent work by others reinforces the authors' original contention that, for critical comparison, a local baseline study is a necessity. Eight 2.5-month-old, helminth-free purebred Beagle dogs (4 male, 4 female) were separated according to sex and housed in a Rockefeller-type isolation building with limited access. Blood samples for analysis were drawn weekly for 57 weeks. Averages for each group on a given sample day were computed and are given in graphic form. When these average values were compared with the literature, lack of agreement again was found. In most cases there were constant, easily discernible differences: the observed averages were consistently either above or below those reported elsewhere.

NUMBER 00181
Bulgin, M.S.
Munn, S.L.
Gee, W.
Hematologic Changes to 4-1/2 Years of Age in Clinically Normal Beagles.
J.A.V.M.A. 157:1064-1070,1970.

NUMBER 00182
Bloor, W.R.
A Method for the Determination of Fat in Milk (Nephelometric Method).
J.Amer.Chem.Soc. 36(1):1300-1304,1914.
A Comparison of nephelometric method, using 1 cc of milk, with Babcock method. Varies by about 3% from Babcock method on human and cow's milk.

NUMBER 00184
Mossman, H.W.
Comparative Morphogenesis of the Fetal Membranes and Accessory Uterine Structures.
Contributions to Embryology, No.158, Carnegie

Institute:133-246,1937.
The author gathers the then information of the comparative morphogenesis of fetal membranes of mammals and attempts to synthesize some useful general concepts from it. Two outlooks are used for this comparative study: morphogenesis of fetal membranes, and phylogeny. Contains 24 plates.

NUMBER 00185
Storrs, E.E.
Williams, R.J.
A Study of Monozygous Quadruplet Armadillos in Relation to Mammalian Inheritance.
Proc.N.A.S. 60:910-914,1968.
The authors had wondered whether unknown factors aside from the gene pool itself do not control the intricate process of differentiation, particularly the extent to which each of the numerous types of differentiated cells proliferate. Using the armadillo's monozygous quadruplets, various tissues were assayed for certain amino acid content, and for organ size. There were 12 parameters for which the range is from 2-fold upto 140-fold.

NUMBER 00186
Saxen, L.
Tetracycline: Effect on Osteogenesis In Vitro.
Science 149:870-872,1965.
Tetracycline hydrochloride added to cultures of rudiments of embryonic bone in a concentration of 1 microgram per milliliter prevents mineralization of the bones and is found throughout the calcified zones. The inhibition is reversible; upon transfer of a treated culture to a normal medium, mineralization proceeds normally but maldeveloped bones result.

NUMBER 00187
Brunden, M.N.
Clark, J.J.
Sutter, M.L.
A General Method of Determining Normal Ranges as Applied to Blood Values for Dogs.
Am.J.Clin.Path. 53:332-339, 1970.

NUMBER 00188
Wallach, M.B.
Gershon, S.
The Induction and Antagonism of Central Nervous System Stimulant-Induced Stereotyped Behavior in the Cat.
European J.Pharmacol. 18:22-26,1972.
Stereotyped behavior can be induced in the cat by d- and l-amphetamine, cocaine, l-dopa, methylphenidate and pemoline magnesium hydroxide. Pretreatment with

alpha-methyl-p-tyrosine inhibits stereotyped behavior due to all amphetamine, pemoline, and to some extent cocaine. Reserpine pretreatment disrupts stereotyped behavior due to all the agents except l-dopa. High doses of Ro 4-4602, a centrally active dopa decarboxylase inhibitor, antagonizes the l-dopa-induced behavior. It would appear that stereotyped behavior is a catecholaminergic phenomenon.

NUMBER 00189
Henricius, G.
(On the Development and Structure of the Placenta of the Cat.)
Archiv.f.Mikrosk.Anat. 37:357-374,1891.
You will have to know a good bit of German to read this one. It is old, and thorough in discription only as the older literature is. The article is very descriptive of the early aspects of the placental development.

NUMBER 00190
Henricius, G.
(On the Development and Structure of the Placenta of the Dog.)
Archiv.f.Mikrosk.Anat. 33:419-439,1889.
A German article fully describing the early placenta of the dog.

NUMBER 00191
Campos, H.A.
Stitzel, R.E.
Shideman, F.E.
Actions of Tyramine and Cocaine on Catecholamine Levels in Subcellular Fractions of the Isolated Cat Heart.
J.Pharmacol.Exptl.Therap. 141:290,1963.

NUMBER 00192
Dyte, C.E.
Autosomal Inheritance of Yellow Coat-Colour in the Domestic Cat.
Nature 193:198-199,1962.
The sex-linked yellow of the cat is not the homologue of recessive yellow in the rabbit and guinea pig.

NUMBER 00193
Carr, L.A.
Moore, K.E.
Release of Norepinephrine and Normetanephrine from Cat Brain by Central Nervous System Stimulants.
Biochem.Pharmacol. 19:2671,1970.

NUMBER 00194

Cools, A.R.
Van Rossum, J.M.
Caudal Dopamine and Stereotyped Behavior in Cats.
Arch.Intern.Pharmacodyn. 187:163,1970.

NUMBER 00195

Brown, I.W.
Eadie, G.S.
An Analytical Study of In Vivo Survival of Limited Populations of Animal Red Blood Cells Tagged With Radioiron.
J.Gen.Physiol. 36:327-343,1953.

Animal red blood cell in vivo survival curves, obtained by the radioiron tagging of populations of approximately the same age followed by the administration of non-radioactive iron to suppress radioiron reutilization, have been subjected to mathematical analysis on the basis of the three following assumptions: (A) Red blood cells disappear from the circulation as the result of senescence: there is an average life span around which the life spans of individual cells are distributed in the usual way. (B) Red blood cells may be removed from the circulation by a process of random destruction which continuously removes a constant fraction of the cells present at any moment irrespective of age or other characteristics. (C) Under the conditions of the experiments described, a fraction of the radioiron, constant for each animal, is reutilized in new red cell formation when released by red cell destruction. This mathematical analysis indicates the following average life spans with the respective standard errors of the mean: dog 107 days +/- 1.14; rabbit 67.6 days +/- 1.94; cat 68.4 +/- 1.50. The mathematical treatment presented has permitted a consideration of the theoretical variation of red cell life spans which was found in these experiments to be relatively small for all three species studied. In the rabbit and cat 2.5 per cent of tagged populations of red cells of the same age would theoretically have disappeared by senescence 17 days before the average life span was reached. The variation of red cell life in the dog was slightly less. Animals of the three species studied, in spite of apparently normal health, exhibited varying degrees of random destruction of both autogenous and transfused fresh normal homologous red cells. As yet, we have no explanation for this random loss of cells occurring in apparently healthy normal animals. The method of mathematical analysis presented is applicable to animal red cell survival studies employing radioiron in which differing rates of random destruction are operating in the removal of red cells.

NUMBER 00196

Anon.
Routine Care of the Laboratory Dog, Albino Rat, Rabbit Hamster, Mouse and Rhesus Monkey.

Hoeltge, Inc.
A commercial fact-sheet for data on care of these animals with information on cages and feeders, enviromental control, handling, floor space and useful physiological data.

NUMBER 00197
King, C.D.
Jewett, R.E.
The Effects of Alpha-methyltyrosine on Sleep and Brain Norepinephrine in Cats.
J.Pharmacol.Exptl.Therap. 177:188,1971.

NUMBER 00198
Randrup, A.
Munkuad, I.
Stereotyped Activities Produced by Amphetamine in Several Animal Species and Man.
Psychopharmacologia 11:300,1967.
Induction of stereotypes in cat and other animals and man.

NUMBER 00199
Ranrup, A.
Munkvad, I.
Pharmacological and Biochemical Investigations of Amphetamine-Induced Abnormal Behavior.
Neuro-psychopharmacology, vol.4, eds. D. Bente and P.B. Bradley, Elsevier, Amsterdam, 1965.

NUMBER 00200
Giddens, W.E., Jr.
Wolf, N.S.
Carlos, A.D.
Boyd, S.J.
Penfold, T.W.
Dolowy, W.C.
Effectiveness of Filter Caging in the Prevention of Viral Diseases of Cats.
J.A.V.M.A. 161(6):591-594,1972.
Five 2-month-old kittens were maintained in good health for 82 days in filter cages within a room used for conditioning laboratory cats. Several sick cats were in the room throughout the period. Five sibling kittens maintained in this room in conventional cages died within 3 weeks of entry. Feline panleukopenia and feline viral rhinotracheitis were diagnosed in the fatally ill kittens and in other sick cats in the room. Precations were taken to minimize formite transmission of infectious agents in both groups of kittens throughout the study period.

NUMBER 00201
Crozier, W.J.
On the Relation Between Birth Weight and Litter Size

in Mice.
J.Gen.Physiol. 23:309-320,1940.
For mice, as for various other mammals, the relation between number N of young in a litter and the weight W of the litter can be expressed as W = aN(to the K power). For adequately homogeneous data K has the nonspecific value 0.83. With data not homogeneous with respect to certain conditions the equation may still be descriptive, but with K higher than 0.83. Two kinds of mice obeying this formulation, with the same K, are an albino strain (AA) and a flex-tail foetal anemic (aa). Their ideal weights of a litter of 1 (W-1, free from effects of intrauterine competition) are quite different. Their F-1 offspring (from AA mothers) give W-1 precisely intermediate. To test the partition theory for the basis of the parabolic equation, backcross and F-2 litters were obtained in which for a span of litter sizes there occurred various proportions of anemic to non-anemic young. For equal numbers of each in the same litters the relation of weight of aa to weight of Aa young is again described by W(sub a) = aW(sub A)(to the K power), and as before K = 0.83. Examination of the weights of anemic and of non-anemic young, for various proportions of the two in litters of different total numbers, shows that the partition theory can account for a number of the curious relations, including the fact that aa young and Aa young if in mixed litters increase in weight more for an increment of 1 in the litter than if in unmixed litters of the same N. This mechanical result of partitioning can be regarded as a kind of model for heterosis resulting from developmental disharmony.

NUMBER 00202
Butler, W.F.
Histological Age Changes in the Ruptured Intervertebral Disc of the Cat.
Res.Vet.Sci. 9:130-135,1968.
The histological changes that are found in the ruptured disc of the cat are described and a sequence of events is suggested. Most ruptures start in the inner annulus. The nucleus pulposus, which is very gelatinous, is gradually lost between the lamellae. The inner annulus collapses inward and the cells proliferate as chondrocytes, rather than degenerate, as in non-ruptured discs. This fibrocartilage is more brittle and becomes 'ground' between the centra leading to cavitation. Finally, the centra are in direct contact and granulation tissue proliferates and may unite the two involved vertebrae. Other conditions encountered include bone-rupture, cartilaginous invasion of blood vessels, and haemorrhage. The relationship to protrusions is discussed and it is noted that ruptures of the annulus can occur, even when the nucleus pulposus is gelatinous.

NUMBER 00203

Dubey, J.P.
Egg Production of Toxocara Cati.
Vet.Rec. 81:671-672,1967.
Fertile egg counts of Toxocara cati in the feces of a naturally-infected and an experimentally-infected cat were 24,222 and 19,000, respectively, per fertile female ascarid.

NUMBER 00204

Si-Kwang, L.
Ettinger, S.
Persistent Common Atrioventricular Canal in Two Cats.
J.A.V.M.A. 153(5):556-562,1968.
Two cats were found with persistent common atrioventricular canal. This cardiac anomaly is characterized by a gross defect in the lowermost part of the interatrial septum and the uppermost part of the interventricular septum. It is associated with a cleft mitral valve. The cats were stunted and had signs of congestive heart failure at the age of 6 months.

NUMBER 00205

Karpas, A.
Routledge, J.K.
Feline Herpes Virus: Isolations and Experimental Studies.
Zbl.Vet.Med. 15:599-606,1968.
Isolation of a feline herpes virus from cases of ulcerative glossitis is described. The virus was found to be serologically identical with Crandell's feline rhino-tracheitis virus. Experimental transmission of this virus in cats produced a wide range of clinical symptoms, including in most cases an ulcerative glossitis. The manifestations of this viral infection are not unlike those of herpes simplex infection in man.

NUMBER 00206

Spencer, H.
Lewin, I.
Samachson, J.
Inhibition of Radiostrontium Absorption in Man.
Internat.J.Appl.Radiation Isotopes 18:779-782,1967.
The effect of aluminum phosphate gel on the absorption of Sr85, given as a single dose, has been studied in man under constant dietary conditions. Aluminum phosphate gel in amounts ranging from 100-300ml reduced the absorption of Sr85 in all patients studied; the average decrease in absorption was 87%. The aluminum phosphate gel was as effective in amounts of 100ml as in amounts of 300ml. This compound appears to be effective in decreasing the absorption of radioactive strontium in cases of acute exposure. Further studies are indicated to study the mode of action of this compound.

NUMBER 00208
Gopinath, C.
Thorpe, E.
The Comparative Histochemistry of Some Hydrolytic and Oxidative Enzymes in the Livers of Several Domestic and Laboratory Animals.
Res.Vet.Sci. 9:435-442,1968.
The distribution of various hydrolytic and oxidative enzymes was studied histochemically in the livers of rats, mice, dogs, cats, and cattle. The enzymes investigated comprised non-specific alkaline phosphatase, adenosine triphosphatase, glucose-6-phosphatase, succinic tetrazolium reductase, DPN diaphorase, glutamic, lactic and sorbitol dehydrogenases. The comparative merits of 2 techniques for the demonstration of succinic tetrazolium reductase were evaluated. It was found that the optimal incubation period for the demonstration of adenosine triphosphatase in the canaliculi of dog liver was considerably in excess of that required for the other species investigated. The 5 species are rated on a relative scale, in tabular form, for the distribution of hydrolytic enzymes in liver.

NUMBER 00209
Barnett, M.
The Use of Polythene for "Elizabethan" Collars.
J.Anim.Tech.Assoc. 9:50-52,1958.
Describes the method of manufacture of a durable Elizabethan collar for small animals from Ziegler Polythene. Pattern for the curves are given.

NUMBER 00211
Butler, W.F.
Metachromasia and Alcian Blue Staining of the Intervertebral Disc of the Cat.
J.Anat. 102(2):301-310,1968.
The toluidine blue metachromasia and alcian blue staining of the disc of the cat from birth to 18 years is described. Both stains are least obvious at birth and increased in older specimens. 80-90% of the disc was metachromatic by 1 year and showed alcian blue staining. After 1 year no increase was seen in the proportion of the disc involved but the inner annulus showed increased intensity of alcian blue staining until 5 years, thereafter remaining constant. In the annulus metachromasia involved the collagen fibrils in and between the lamellae. Alcian blue stained fibrils between the lamellae in the outer annulus but within the lamellae of the inner annulus. In the nucleus pulposus metachromasia was fibrillar but alcian blue staining was homogeneous. The possible significance of these observations is discussed.

NUMBER 00215
Gibson, R.W.

Bross, I.D.J.
Graham, S.
Lilienfield, A.M.
Schuman, L.M.
Levin, M.L.
Dowd, J.E.
Leukemia in Children Exposed to Multiple Risk Factors.
New England J.Med. 279(17):906-909,1968.

The association between four factors - mother's irradiation before conception, in utero irradiation of the child, previous-history of reproductive wastage, and early childhood virus diseases - was studied in children one to four years old. A simple rise in the number of factors did not consistently increase the risk for leukemia. Children with irradiation but without either of the pathologic conditions did not show a greater risk for leukemia, nor did those with the pathologic conditions but without irradiation. However, children exposed to two radiological factors who also had a history of one pathologic event had a significantly increased risk (2.69), as did those with a history of two pathologic factors who had also been exposed to one of the irradiation factors (3.36). The highest risk was 4.64 for children exposed to all four factors. Therefore, only when there was a concordance of the two types of events, irradiation and pathologic, was the risk for leukemia significantly greater.

NUMBER 00216

Dixon, R.T.
Exposure Doses of X-radiation Incurred During Veterinary Diagnostic Radiological Examinations.
Australian Vet.J. 44:299-303,1968.

The number of radiographs taken per week has been calculated for a Veterinary School practice for three periods. In the first period the number averaged 35 per week; in the second period, 45 per week and in the third period 64 exposures per week. The exposure dose of X-radiation per radiograph was calculated for personnel taking the radiographs in each of these periods. In the first period the exposure dose for the radiologist was 0.183 mrem per radiograph. The conditions in this period approximated those in a practice in which the veterinarian restrained and positioned the animals without additional help. In the second period the dose for the radiologist was 0.16 mrem per exposure, and for one assistant who helped restrain the animals the dose was 0.019 mrem per exposure. The conditions here approximated a practice in which the veterinarian and a trained lay assistant restrain and position the animal. In the third period the radiologist's exposure dose had decreased to 0.044 mrem, and the dose for a radiographer was 0.052 mrem. This approximated the conditions in a practice with two or more veterinarians using trained lay assistants. The average exposure dose for 24 students was 0.093 mrem per exposure, and this figure is considered applicable to owners who hold and position their animals in a veterinary practice. The exposure dose per radiograph to the body of the veterinarian, his assistants, and to members of the public was considered in relation to the maximum permissible dose of radiation. It was recommended that owners not be used to restrain their own animals, and methods of reducing the radiation dose per radiograph to the veterinarian and his assistants were discussed.

NUMBER 00217
Clark, L.
Seawright, A.A.
Skeletal Abnormalities in the Hindlimbs of Young Cats as a Result of Hypervitaminosis A.
Nature 217(5134):1174-1176,1968.
Three kittens recieved 100,000 I.U. Vitamin A daily for 4 weeks. Two weeks later the kittens had a distinctly abnormal gait and the hindlimbs were short. Gait abnormalities were chiefly caused by bilateral symmetrical prolongation of the anterior proximal tibia, making extension of the stifle joints beyond 90 degrees mechanically impossible. The osteodystrophy described here probably occurs in some kittens fed intensively for a short period on livers which are unusually high in vitamin A content.

NUMBER 00220
Johnson, G.R.
Koestner, A.
Rohovsky, M.W.
Experimental Feline Infectious Enteritis in the Germfree Cat.
Path.Vet. 4:275-288,1967.
Selected tissues from 13 germfree and 3 specific pathogen-free cats experimentally infected with feline infectious enteritis were studied electron microscopically. Intestinal lesions consisting of dilatation of intercellular spaces and of endoplasmic reticular cisternae occurred only in specific pathogen-free cats. No lesion was demonstrated in the intestine of infected germfree cats, indicating that the virus of feline infectious enteritis may not be solely responsible for the intestinal lesions described in the naturally occurring disease. The lesions in the lymph nodes were identical in specific pathogen-free and germfree cats and consisted of lymphocytic destruction within 72 hours post-inoculation and reactive proliferation of reticular cell-macrophages and plasma cells. The preferred designation of this disease in cats as feline infectious panleukopenia is supported.

NUMBER 00221
Anon.

Procurement Specification IV. Conditioned Random-Source Cats.
Inst.Lab.Anim.Resources, Nat.Acad.Sci., Nat.Res. Council, 1968.
Procurement specifications prepared by the Institute of Laboratory Animal Resources are recommended for use by research facilities. They are to be incorporated in the contract between the buyer and seller of laboratory animals. This assures the buyer that the animals received have had the care, facilities, and treatment prescribed. This procurement specification for conditioned cats is for purchasing cats stabilized for research use by the dealer. The committee feels that the conditioning or stabilizing period requires a minimum of 30 days. No matter what quality of cat is required, it is necessary for a representative of the research facility to make an initial inspection of the dealer's facilities to determine if the requirements of this contract clause are being met. Periodic inspections of the dealer's facilities and practices, as well as a careful examination of the animals at the time of delivery, are also recommended. Conditioning program includes a minimum of a 30 day period, clinically free of ecto- and endoparasites, vaccination against panleukopenia and rabies at least 21 days before delivery, hemoglobin of 8-15 gram %, PCV of 24-25% and WBC of 5500-19500 per cubic mm.

NUMBER 00222
Anon.
Standards for the Breeding, Care and Management of Laboratory Cats.
Inst.Lab.Anim.Resources, Nat.Acad.Sci., Nat.Res.Council, 1964.
A 16-page outline of recommended standards for lab cat care. Includes sections on facilities; food, bedding and litter; equipment cleaning; and disease and parasite control.

NUMBER 00223
Anon.
N.I.H. Standard Animal Care Equipment.
N.I.H., Office of Administrative Management, Procurement Section, 1966.
A catalogue of cages and other animal care equipment commonly used in N.I.H. laboratories. A drawing and specifications of each item is given.

NUMBER 00224
Anon.
Procurement Specification II. Non-conditioned Random-Source Cats.
Inst.Lab.Anim.Resources, Nat.Acad.Sci., Nat.Res. Council, 1966.
This procurement specification is designed to provide the

biomedical community with uniform specifications for procuring laboratory cats. The specification calls for upgrading the animal care and transportation practices of dealers. It requires identification of cats, which has not been a common practice, but is considered necessary to establish proof of ownership and is now required by federal law. The provisions will undoubtedly increase the ultimate cost of research cats. The research institution is again advised to implement the specification by using i as a contract clause. The enforcement of the specification will require officials to observe the vendor's practices when animals are delivered to the institution and to inspect the vendor's premises. Limitations are placed on the laboratory use of the nonconditioned random-source cat because its environmental background is largely unknown. If this cat is to be used as received, its use is generally limited to those experiments in which the animal is not allowed to recover from anesthesia. A quarantine and conditioning period of from three to six weeks is required after receipt to utilize this type of cat in more involved studies. The obligation of the research facility to maintain minimum standards for humane handling, care, treatment, and transportation of animals is also recognized by the committee.

NUMBER 00225

Barranco, S.C.
Beers, R.F., Jr.
Merz, T.
Marrow Cell Injury Following Ca-45 Uptake in Bone.
Am.J.Roentgenol.Rad.Therapy Nucl.Med. 103(4):849-855, 1968.

The effects of Ca-45 on the cells of the bone marrow in the cat were studied. Animals in 5 groups received injections of 25 microcuries, 50 microcuries, 100 microcuries, 200 microcuries, and 300 microcuries of Ca-45, respectively. They were sacrificed at 12 hours, 24 hours, 36 hours, 2 days, 4 days, 6 days, 8 days, 12 days, 19 days, 25 days, and 32 days, and the bone marrow was removed from the tibiae and assayed for damage. The incidence of micronuclei and the changes in the mitotic index were used as an indication of radiation damage to the nucleus. The following results were obtained: A generally linear increase in micronuclei was observed with increasing activity of Ca-45. Doses as low as 50 microcuries produced a 2.92 fold increase in micronuclei. Within the first 4 days after injection of the isotope, bone marrow from animals receiving a 300 microcuries dose showed about 5 times as many micronuclei as controls. When the animals treated with 25 microcuries were observed at 12, 24, 36, and 48 hours after injection, 4.75, 5.63, 3.00, and 1.69 fold increases, respectively, were noted in micronuclei. The mitotic index of the bone marrow cells from all treated animals remained below normal throughout the experiment and at the 32nd day was still from 2.4 to 5.1 times lower than the controls.

NUMBER 00226

706,709
Zook, B.C.
Holzworth, J.
Thornton, G.W.
Thallium Poisoning in Cats.
J.A.V.M.A. 153(3):285-299,1968.

Thallium poisoning was diagnosed in 22 cats on the basis of characteristic gross and microscopic lesions or demonstration of thallium in urine or tissues. Thirteen subacute or chronic poisonings, predominantly in young cats, were characterized by striking skin changes which progressed through stages of reddening, crusting, peeling, and alopecia. Such lesions began on the ears or lips and gradually involved the face, head, feet, limbs, and torso. Other signs of illness were apathy, inappetence, and vomiting. Fever was uncommon. Hypersensitivity, tremors, ataxia, paresis, and bodily contortions were late signs in many cases and reflected peripheral and central neuropathy. These longer illnesses were usually accompanied by neutrophilic leukocytosis, a shift to the left, and moderate anemia. Nine older cats with severe illness of shorter duration and no skin changes had signs of hemorrhagic gastroenteritis and hepatic or renal damage. High fever, leukopenia, and anemia were typical. Skin lesions when advanced are characteristic of thallium poisoning. Microscopic changes are severe parakeratosis, acanthosis, parakeratosis or dilatation of hair follicles, focal purulent epidermal or perifollicular inflammation, hyperemia, and edema. Other typical lesions are nephrosis, polyneuritis, and necrosis of skeletal and myocardial muscle fibers. Some cats had necrotizing and inflammatory lesions in the liver, tongue, esophagus, stomach, intestine, pancreas, and testicles. Diphenylthiocarbazone cannot at present be recommended for treatment of cats. Until a reliable antidote becomes available, treatment must be symptomatic and supportive. The only cats that recovered were maintained by oral feeding.

NUMBER 00227

Collins, G.R.
The Design and Use of Filter Cages for Cats and Rabbits.
Lab.Anim.Care. 19:659-661,1969.

NUMBER 00228

Karpas, A.
Garcia, F.G.
Calvo, F.
Cross, R.E.
Experimental Production of Canine Tracheobronchitis

(Kennel Cough) with Canine Herpesvirus Isolated from Naturally Infected Dogs.
Am.J.Vet.Res. 29(6):1251-1257,1968.
Canine herpesvirus was isolated from 12 of 75 naturally infected dogs from which swabs were collected. Virus was isolated from dogs with clinical form of the respiratory disease and from dogs with no clinical signs, indicating there may be a carrier state. Results of serum-neutralization tests of the dogs examined indicated that a positive serum could be detected also in dogs with clinical signs but from which virus could not be isolated. Results of tests of experimentally infected dogs indicated that the clinical course of the respiratory disease varied from subclinical infection to acute respiratory illness. Experimentally infected dogs shed the virus for approximately 2 weeks after the inoculation was made and developed neutralizing antibodies to the inoculated virus.

NUMBER 00229
Hamilton, M.N.
Edelstein, S.J.
Cat Hemoglobin: pH Dependent Cooperativity of Oxygen Binding.
Science 178:1104-1105,1972.
Cat hemoglobin has a lower cooperativity and oxygen affinity than most mammalian hemoglobins. In contrast to the usual invariance of cooperativity with pH, a rise in cooperativity with pH is predicted by the allosteric model for low-affinity hemoglobins. Such a pH-dependent cooperativity for cat hemoglobin has been found.

NUMBER 00230
Abbott, C.P.
Howe, A.
Ultrastructure of Aortic Body Tissue in the Cat.
Acta Anat. 81:609-619,1972.
Aortic body tissue, located at the root of the left sublavian artery (group 2) in the adult cat and fixed by vascular perfusion, was obtained for electronmicroscopy. This is the first account of the ultrastructure of aortic body tissue. Ultrastructurally, the tissue was indistinguishable from the carotid body. Two main types of cell were present: the larger more rounded type I glomus cells, with their characteristic membrane-bound cytoplasmic granules, invested by the more flattened, branched type II glomus cells. Nerve fibres penetrated between these cells, being wrapped in mesaxon-like folds of type II cells during part of their course, and their unmyelinated nerve terminals made synapse-like contacts with type I glomus cells. These 'synaptic' endings were characterised by the presence of abundant 'synaptic' vesicles, small mitochondria and groups of glycogen granules. The apposed plasma membranes of type I glomus cells and nerve

terminals exhibited the desmosome-like thickenings, from 2 to 8 in any section, typical of synapses generally. In the light of present knowledge it seems likely that these fibres are efferent in nature. Glomus cells granules (mainly 1,200-2,000 Angstroms diameter, range 400-5,000 Angstroms), unmyelinated nerve fibres (0.2-0.5 micrometer diameter) enclosed by type II cells, nerve terminals (up to 2.5 micrometer diameter) and synaptic vesicles (approximately 500 Angstroms diameter) were in general of the same order of size as the corresponding structures already described for the carotid body of the cat and rabbit. Cilia, in association with type I cells, were occasionally seen. The common ultrastructural morphology of carotid and aortic body tissue in the adult animal adds further support to earlier views, based on their embryology and pathology, of the homology of these two groups of vascular chemoreceptors.

NUMBER 00231
McKibben, J.S.
Getty, R.
A Comparative Morphologic Study of the Cardiac Innervation in Domestic Animals. II. The Feline.
Am.J.Anat. 122(3):545-553,1968.
Detailed morphological studies of the cardiac innervation of the cat were reported. Sympathetic cardiac nerves arose from the thoracic, cervicothoracic, vertebral, and intermediate ganglia. Parasympathetic cardiac nerves arose from the vagi, both cranial and caudal to the origin of the recurrent laryngeal nerves, and from the right recurrent laryngeal nerve. Left cardiac nerves passed primarily to the caudal and right surfaces of the left chambers while right ones ramified on the right chambers and left portion of the left chambers. Left cardiac nerves are more prominent around the coronary sinus and atrioventricular node, while right ones contribute more to the area of the sinoatrial node. Both sympathetic and parasympathetic nerves were followed to each chamber. Interconnections through the cardiac plexus facilitated overlapping of nerve distributions.

NUMBER 00232
Biscoe, T.J.
Lall, A.
Sampson, S.R.
On the Nerve Endings Associated with the Carotid Body Glomus Cells of the Cat.
J.Physiol. Loudon 200:131-132P,1969.

NUMBER 00233
Edwards, W.C.
Ascorbic Acid for Treatment of Feline Rhinotracheitis.
Vet.Med./Small Anim.Clin. 63(7):696-698,1968.
Sixty-four cats with clinically diagnosed feline

rhinotracheitis were treated with ascorbic acid (27), tylosin (19) and a combination of ascorbic acid and tylosin (18). Four untreated cats served as controls. The average recovery time was 4.9 days for those treated with ascorbic acid only, 8.9 days for those treated with tylosin only, 5.3 days for those receiving the combination of ascorbic acid and tylosin, and 13 days for the untreated controls.

NUMBER 00234
Todd, N.B.
The Inheritance of Taillessness in Manx Cats.
J.Hered. 52:228-232,1961.
Data gathered on crosses involving Manx cats, while not altogether statistically conclusive, lend support to the suspicion that taillessness is at least partially lethal. There is a statistically significant difference in the litter size produced by two Manx cats (2.95 +/- .22) and that produced by two tailed cats (3.88 +/- .20). Attempts to place the Manx factor in an Oriental genome support the contention that taillessness in these two populations is due to two different mutants.

NUMBER 00235
Coleridge, H.
Coleridge, J.C.G.
Howe, A.
A Search for Pulmonary Arterial Chemoreceptors in the Cat, with a Comparison of the Blood Supply of the Aortic Bodies in the New-born and Adult Animal.
J.Physiol.London 191:353-374,1967.

NUMBER 00236
Laird, H.M.
Jarrett, O.
Crighton, G.W.
Jarrett, W.F.H.
Hay, D.
Replication of Leukemogenic-Type Virus in Cats Inoculated with Feline Lymphosarcoma Extracts.
J.Nat.Canc.Inst. 40(4):879-893,1968.
Electron microscopy of the spleen and bone marrow from a cat with spontaneous feline lymphosarcoma revealed leukemogenic-type viruses. Newborn kittens and adult cats were inoculated with an extract or a filtrate prepared from tumor tissue from the cat. Infected kittens and cats were bled by cardiac puncture approximately 4 and 6 weeks after injection, and pellets of blood platelets were prepared for electron microscopy. The same type of virus as in the donor animal budded from the surface of the platelets and into platelet vacuoles, and complete virus particles were found free between the platelets and in platelet vacuoles. Platelet pellets from uninfected kittens bled at 28 and 42 days showed no virus particles. Bone marrow,

thymus, and spleen from each of 2 kittens killed 28 days after inoculation contained fully formed and budding particles of the leukemogenic type. The clinical disease developed in some kittens.

NUMBER 00237
Laird, H.M.
Jarrett, O.
Crighton, G.W.
Jarrett, W.F.H.
An Electron Microscope Study of Virus Particles in Spontaneous Leukemia in the Cat.
J.Nat.Canc.Inst. 41(4):867-878,1968.

In an electron microscopic study of a randomly selected series of cases of spontaneous feline lymphosarcoma, virus particles were observed in tissues from 5 of 8 animals. Spleen, bone marrow, thymus, and several lymph nodes were examined, and in each of the 5 virus-containing cases, particles were observed in at least two of the tissues. The particles, approximately 100 millimicrons in diameter, were observed extracellularly, in intracytoplasmic vacuoles, and budding from the plasma and vacuolar membranes into extracellular spaces. Morphologically, the particles were the same as those found in an experimentally induced case of feline lymphosarcoma.

NUMBER 00238
Hensel, H.
Specific Warm Impulses From the Nasal Region of the Cat.
Pflugers Arch. 302:374-376,1968.

The back of the nose in the cat contains numerous warm receptors with spot-like receptive fields. They are not excited by mechanical stimulation. Multi-fibre preparations from this area respond to warming with an increased integrated discharge. At constant temperatures from 30 degrees C on, single fibres from nasal warm receptors have a steady discharge, the frequency of which rises steeply with temperature up to 45 degrees C and then drops to zero. Rapid warming causes an overshoot, rapid cooling a transient inhibition of the discharge. The maximum static and dynamic frequencies of single warm fibres are 50 and 200 Imp/sec, respectively, the maximum static and dynamic sensitivities 20 and 80 Imp/sec degrees C.

NUMBER 00239
Currey, J.D.
The Adaptation of Bones to Stress.
J.Theor.Biol. 20:91-106,1968.

Three models concerning the adaptive growth of bone in response to stress are considered from the point of view of the minimum amount of information required by any local group of cells. It is shown that a model produced by Bassett will not work unless the bones are considered as solid. A model produced by Frost will not work if bones are loaded in tension. A further model is put forward that circumvents these difficulties.

NUMBER 00240
Hollinshead, W.H.
The Origin of the Nerve Fibers to the Glomus Aorticum of the Cat.
J.Comp.Neurol. 71:417-426,1939.

NUMBER 00241
Hollinshead, W.H.
The Innervation of the Supracardial Bodies in the Kitten.
J.Comp.Neurol. 73:37-47,1940.

NUMBER 00242
Kourilsky, F.M.
Dausset, J.
Feingold, N.
Dupuy, J.M.
Bernard, J.
Leukocyte Groups and Acute Leukemia.
J.Nat.Cancer Inst. 41:81-87,1968
The frequency and the distribution of 10 leukoplatelet antigens of the HL-A system (the designation "HU-1 system" has been changed to "HL-A") were determined on the leukocytes and platelets of 116 patients with acute leukemia in remission. These were compared with those observed in 234 nonleukemic individuals. No significant difference was noted between these two groups. The reactivity to cytotoxic immune sera of the lymphocytes of the patients in longer remission appears weaker than that of nonleukemic individuals.

NUMBER 00243
Howe, A.
The Vasculature of the Aortic Bodies in the Cat.
J.Physiol.London 134:311-318,1956.

NUMBER 00244
Howe, A.
Morphological and Functional Studies of Thoracic Chemoreceptors - the Aortic Bodies - in the Cat.
Ph.D. Thesis, London, 1957.

NUMBER 00245
Lever, J.D.
Lewis, P.R.

Boyd, J.D.
Observations on the Fine Structure and Histochemistry of the Carotid Body in the Cat and Rabbit.
J.Anat.London 93:478-490,1959.

NUMBER 00246
Clark, L.
Whitwell, G.B.
Ciguatera Poisoning in Cats in Brisbane.
Austral.Vet.J. 44:81,1968.
In Queensland, cats are used for bio-assay of fish suspected of involvement in ciguatera (a non-bacterial icthyosarcotoxism) poisoning. Symptoms first appear in 6 hours, with partial paralysis of fore and hind limbs, ataxia, inappetance and excess salivation. More affected cats did not recover in 2 weeks.

NUMBER 00247
Rohovsky, M.W.
Griesemer, R.A.
Experimental Feline Infectious Enteritis in the Germfree Cat.
Path.Vet. 4:391-410,1967.
In the absence of other microorganisms the virus of feline infectious enteritis produced a mild, non-fatal clinical disease in germfree cats. A biphasic temperature rise occurred on post inoculation day (PID) 2 and 4. All of the germfree cats began to recover by PID 7. Absolute lymphopenia occurred on the first day followed by absolute neutropenia on PID 4. The leucocyte counts were within the normal range by PID 10. Severe atrophy of the thymus was the only macroscopic lesion produced. Depletion of mature lymphocytes and reticuloendothelial cell hyperplasia occurred in all other lymphocytic tissue. No inclusion body considered to be of diagnostic significance could be demonstrated. There was no evidence of enteritis grossly or microscopically in germfree cats.

NUMBER 00248
Rudy, T.A.
Wolf, H.H.
Effect of Intracerebral Injections of Carbamylcholine and Acetylcholine on Temperature Regulation in the Cat.
Brain Research 38:117-130,1972.
One microliter of 0.01 M carbamylcholine, injected into the diencephalon or mid-brain of unanesthetized, partially restrained cats produced one of three effects: a major increase in colonic temperature, usually preceded by a small decrease; a small decrease in colonic temperature followed by an equally small increase; a major decrease in colonic temperature followed by an increase in variable magnitude. Major decreases in temperature were usually accompanied by vasodilation of the ear pinna and reduced EMG activity. Increases in temperature were accompanied

by increased EMG activity and often by vasoconstriction (when the latter was measurable due to a prior decrease in vasomotor tone). Hypothermic effects were elicitable by injections into widespread hypothalamic and 2 upper midbrain loci. Hypothermic responses were obtained by injections only into the rostral hypothalamus and preoptic regions. Regardless of the response elicited by 0.01 M carbamulcholine, increasing the dose to 0.03 or 0.10 M usually augmented the initial hypothermic phase, in some instances to such an extent that the first type of response were converted to the third type of responses. Conversely, lowering the dose to 0.003 M in some cases resulted in attenuation of the hypothermic phase so that hyperthermia became the predominant effect. The effects of 0.03 or 0.10 M acetylcholine (mixed with an equal weight of eserine sulfate) were similar to, but of lesser magnitude and duration, than those elicited by carbamylcholine.

NUMBER 00249
Connor, J.D.
Rossi, G.V.
Baker, W.W.
Characteristics of Tremor in Cats Following Injections of Carbachol into the Caudate Nucleus.
Exp.Neurol. 14:371-382,1966.

NUMBER 00250
Connor, J.D.
Rossi, G.Y.
Baker, W.W.
Analysis of the Tremor Induced by Injection of Cholinergic Agents into the Caudate Nucleus.
Int.J.Neuropharmacol. 5:207-216,1966.

NUMBER 00251
Feldberg, W.
Myers, R.D.
Changes in Temperature Produced by Microinjections of Amines into the Anterior Hypothalamus of Cats.
J.Physiol.London 177:239-245,1965.

NUMBER 00252
Hart, B.L.
Sexual Reflexes and Mating Behavior in the Male Dog.
J.Comp.Physiol.Psychol 64(3):388-399,1967.
Appetitive behavior and copulatory responses which characterize the mating behavior of male dogs (beagles) were studied in detail. Four different sexual reflexes exhibited by spinal male beagles were compared to relevant aspects of the mating behavior. It was concluded that some aspects of mating behavior, particularly the intense ejaculatory reaction (IER) and the copulatory lock, are

probably completely mediated at the spinal level and the sexual refractory period is partially a reflection of refractoriness of spinal elements. Evidence is presented to support the hypothesis that the IER, which appears to be normally inhibited by supraspinal structures, is facilitated by neural disinhibition rather than neural excitation during sexual excitement.

NUMBER 00253
Rudy, T.A.
Wolf, H.H.
The Effect of Intrahypothalamically-Injected Sympathomimetic Amines on Temperature Regulation in the Cat.
J.Pharmacol.Exptl.Therap. 179:218-235,1971.

NUMBER 00254
Shadduck, J.A.
Pakes, S.P.
Encephalitozoonosis (Nosematosis) and Toxoplasmosis.
Am.J.Path. 64(3):657-672,1971.
Spontaneous encephalitozoonosis and toxoplasmosis have interfered significantly with the interpretation of data obtained with experimental animals. Encephalitozoonosis, especially, continues to be an important problem because of its high incidence (20-50%) in laboratory rats, mice and rabbits, and because of the lack of a simple reliable diagnostic test. The use of susceptible cell cultures instead of mice for the detection of viable organisms its suggested until an acceptable serologic method becomes available. The new data on the role of the cat as the source of the infectious oocyst of Toxoplasma reemphasize the importance of maintaining effective barriers between species when housing laboratory animals.

NUMBER 00255
Meier, F.W.
Urethroadenocystitis in the Male Cat.
J.A.V.M.A. 151(8):1059-1071,1967.
Eleven cases of lower urinary tract disease in male cats were clinically investigated. Clinical observations and laboratory procedures pointed to a microbe as the etiologic agent. Pseudomonas was isolated and culturally identified in every case. A method of differentiating between obstructive and nonobstructive forms of disease was based on palpable characteristics of the urinary bladder. A brief description of necropsy findings are included. The nature of the lesions in this disease and characteristics of pseudomonas organisms are compatible. Clinical procedure includes outline of preparation of patient, removal of obstruction, catheterization, bacteriologic determinations, and a table of all organisms isolated. Treatment with a wire loop and 1/12 N sulfuric acid solution was successful. With application of a

topical anesthetic, general anesthesia was not necessary.

NUMBER 00263
Jarrett, O.
Laird, H.M.
Hay, D.
Crighton, G.W.
Replication of Cat Leukaemia Virus in Cell Cultures.
Nature 219:521-522,1968.
The authors describe the infection of primary cultures of kitten tissues (combined spleen, thymus, liver, kidney and heart) with CLV. In a second experiment kitten embryo lung monolayer cells were also infected with CLV. No apparent differences in gross cellular morphology were seen between the two. It seems that CLV can replicate continuously in homologous cell cultures.

NUMBER 00266
Hillaby, J.
Ancestors of the Tabby.
New Scientist p.404-405,1968.
The author reviews the use man and cat have made of each other over the thousands of years of the cat's domestication. It is suggested that the alley cat is not very separated genetically from its wild ancestors.

NUMBER 00267
Unknown.
Growth-Rate In Utero.
Lancet 1:765-766,1967.
The author reviews and discusses some of the short-comings in research into small and/or premature infants. He shows how clear, accurate documentation and assessment of gestational age will be of prime importance in such future research.

NUMBER 00276
Simon, N.
Holzworth, J.
Eosinophilic Leukemia in a cat.
Cornell Vet. 57(4):579-597,1967.
A case history of eosinophilic leukemia in a 4-year female cat with diarrhea and pronounced eosinophilia. Prime diagnostic clues were the cat's poor therapeutic response to corticosteroids (which ruled out eosinophilic enteritis), refractory anemia, increased population of immature eosinophils in peripheral blood, increased eosinophils in the bone marrow, and spenomegaly. At post-mortem, and histopathology exam, there was an evident tumor in the kidneys, and eosinophilic invasion of marrow, liver, spleen, lymph nodes, intestine and heart.

NUMBER 00278

Poiley, S.M.
An Improved Method for Limiting the Introduction or Transmission of Pathogens in Production and Research Animal Areas.
Lab.Anim.Care. 17(6):573-580,1967.
Barrier systems for animal production and the protection of research animals require precautionary measures which discourage frequent visits by supervisory personnel. By eliminating the self-perpetuating factor in production colonies, and isolating individual groups in holding rooms by means of protective devices, limitations are imposed upon the probable introduction or transmission of diseases. Further support is afforded by appropriate facilities design.

NUMBER 00287

Kilham, L.
Margolis, G.
Colby, E.D.
Congenital Infections of Cats and Ferrets by Feline Panleukopenia Virus Manifested by Cerebellar Hypoplasia.
Lab.Invest. 17(5):465-480,1967.
In a study of intrauterine infections with the panleukopenia virus, the uteri of pregnant cats were exposed and fetuses inoculated directly. The severity of infections induced varied with the time of gestation and the duration of the infectious process, but in general the viral attack centered on the external germinal layer of the cerebellum and was characterized by an early inclusion body phase, followed by cytopathic effects which finally led to a severe degree of cerebellar hypoplasia. One pregnant cat and one pregnant ferret were given feline panleukopenia virus parenterally. In each case the virus passed through the placental barrier and induced cerebellar hypoplasia in a fetus which was sacrificed after birth. Histologic findings are presented in detail. These inoculations demonstrated that a picture similar to that seen in cats with spontaneous cerebellar ataxia can be induced by intrauterine infections under experimental conditions. Studies were also made of kittens sent to us having the spontaneous disease. It was shown that such animals can be carriers of active virus for months after birth in various organs, and especially in kidneys as can be shown by direct cultivation. Parallels between congenital infections of panleukopenia of cats and rubella infections of man form the subject of a final discussion.

NUMBER 00289

Warkany, J.
Takacs, E.
Changes of Endocrine Glands Produced by Teratogenic Methods: The Pituitary Gland.

Arch.Path. 85:101-113,1968.
Specimens obtained from teratologic experiments can ge used for examination of questions about prenatal physiology and pathlogy. In exencephalic near-term fetuses the anterior pituitary lobes are usually present, but their positions and connections with the posterior lobes and the brain are variable. The adrenals of such animals show normal differentiation and only slightly reduced size. In apituitary fetuses the adrenals are also present but they are small and undifferentiated. In hydrocephalic fetuses the pituitaries appear normal at the end of gestaton.

NUMBER 00290
Okoshi, S.
Usui, M.
Experimental Studies on Toxascaris Leonina. I. Incidence of T.Leonina Among Dogs and Cats in Japan.
Jap.J.Vet.Sci. 29:185-194,1967.
The differences in morphology among three species of ascarids, Toxascaris leonina, Toxocara canis, and T. cati were discussed. Then the incidence of these parasites in the Veterinary Hospital, University of Tokyo, was mentioned. Results are summarized as follows. T. leonina began to be observed in dogs in 1958. Its incidence among the dogs examined at the hospital during the past nine years was as low as 1.27% while that of T. canis was 9.62%. It was assumed that imported dogs might be the main source of T. leonina infection in dogs. T. leonina was infective equally to young and adult dogs. Five cats were found infected with T. leonina in 1965 and 1966. They were imported cats or cats which had got in touch with imported cats. This is the first description of feline infection with T. leonina in Japan. The incidence of T. leonina among cats for the past two years was 5.0% and that of T. cati 17.0%. It was suggested that the prevalence of T. leonina in dogs and cats in future might increase in accordance with an increase in number of imported pet animals.

NUMBER 00292
Fowler, J.H.
Nash, D.J.
Erythropoiesis in the Spleen and Bone Marrow of the Pregnant Mouse.
Developmental Biology 18:331-353,1968.
Pregnancy in the mouse constitutes a hematopoietic stress in that blood volumes increase progressively during pregnancy. The spleen plays an important erythropoietic role in combating the dilution anemia of pregnancy. The degree of splenic response and anemia are directly dependent upon litter size. Administration of exogenous iron does not prevent the development of anemia nor prolong

the period of increased hematopoiesis. Splenectomized mice were used to determine how the marrow compensates for the absence of the spleen during pregnancy.

NUMBER 00293
Wintrobe, M.M.
Shumacker, H.B., Jr.
Erythrocyte Studies in the Mammalian Fetus and Newborn.
Am.J.Anat. 58(2):313-328,1936.
This report includes data on 11 cat fetuses and 8 newborn cats, as well as data on pigs, rabbits, rats, and dogs, The age of fetuses were estimated to range between 35 and about 50 days for cats in utero, and up to 14 days after birth. No tables of values are given, but a figure showing relative curves for the cat's red blood cell numbers, hemoglobin, hematocrit, red cell diameter, corpuscular volume, mean corpuscular hemoglobin and mean corpuscular hemoglobin concentration is given. Red blood cell count, hemoglobin and hematocrit are low in the fetus, while the red cell is large, chiefly nucleated and contains relatively high amounts of hemoglobin. As the fetus ages, the first group increases, with a corresponding decrease in the second group. Mean corpuscular hemoglobin concentration remains stable. There is a period during which these changes take place rapidly, corresponding, at least in man and the rabbit, to the period in which blood formation in the liver is most intense.

NUMBER 00294
Wurster, D.H.
Benirschke, K.
Comparative Cytogenetic Studies in the Order Carnivora.
Chromosoma 24:336-382,1968.
The chromosome morphology of at least 93 species of carnivores has now been investigated. This information has been summarized. A bibliography of 124 articles is given. For the domestic cat, 2n is 38; NF is 72.

NUMBER 00295
Glenn, B.L.
Glenn, H.G.
Omtvedt, I.T.
Congenital Porphyria in the Domestic Cat (Felis Catus): Preliminary Investigations on Inheritance Pattern.
Am.J.Vet.Res. 29(8):1653-1657,1968.
Based on initial data, the inheritance pattern of the porphyric trait in cats is compatible with a hypothesis of simple mendelian autosomal dominance and appears to be analogous to that of congenital porphyria in swine. Dominant inheritance of congenital porphyria in swine and in cats, as opposed to recessive inheritance

of the condition in man and in cattle, suggests there may be fundamental differences in the biochemical mechanisms involved in the 2 species groups.

NUMBER 00296
Lloyd, D.P.C.
Action of Sodium Acetylsalicylate Upon Sweat Glands of the Cat's Foot Pad.
Proc.Nat.Acad.Sci. 60(4):1319-1322,1968.
Sodium acetylsalicylate, at a dose of 100 mg/kg I.V., by means other than central action, can induce some secretory activity on the part of sweat gland cells. A dose of 30 mg/kg does not induce such activity.

NUMBER 00297
Ounsted, M.
Ounsted, C.
Rate of Intra-uterine Growth.
Nature 220:599-600,1968.
Intra-uterine growth weight was assessed by plotting birth weight against growth curves of data of the 1958 Perinatal Mortality Survey. Various statistical manipulations and analyses indicate that slow intra-uterine growth is determined by a single constraining factor of large and constant effect. Accelerated fetal growth appears to be determined by several additive factors, both familial and maternal.

NUMBER 00299
Miller, W.L.
Trubowitz, S.
A Simple Method for the Retrieval of Human Marrow Tissue Particles from Aspirates.
Amer.J.Clin.Path. 50(5):661-663,1968.
Human marrow tissue procured by aspiration is usually contaminated with blood and therefore, awkward to process for quantitative studies. A method is described for simple and efficient separation and collection of quantities of marrow tissue sufficient for investigational pruposes. An indication of the simple size obtained in this laboratory is given.

NUMBER 00304
Fry, E.I.
Assessing Skeletal Maturity : Comparison of the Atlas and Individual Bone Techniques.
Nature 220:496-497,1968.
Two widely varying systems are generally used for the studying of the growth in children. The Greulich-Pyle system (GP) matches a wrist x-ray film against an atlas, on an overall basis; the Tanner and Whitehouse system (TW) assigns a numerical score to each of 20 bones in the hand-wrist complex. At present one can

not say if one or the other system is more correct, although in theory the more painstaking TW technique should be more precise. In practice, the large scale divergencies between the TW scores and the GP means, as well as the wide fluctuations of the TW ratings, indicate the gap between theory and practice.

NUMBER 00309

Prescott, C.W.
A Case of Tonsilitis in a Cat.
Austral.Vet.J. 44:331-332,1968.
A bilateral necrotising tonsilitis in a cat is reported. Fusiformis sp were plentiful in the lesions and were believed to be the primary cause. The condition failed to respond to either penicillin or chloramphenicol therapy, but was rapidly cured by tonsilectomy using electrocautery.

NUMBER 00311

Walnut, T.H.
A Mathematical Analysis of the Changes in the Size and Shape of Bones During Growth.
Growth 31:217-230,1967.
A mathematical method is developed suitable for description of the growth of bones. It is designed for use in analyzing the result of dye feeding experiments in bone growth. Various types of growth are classified and their observed color patterns in dye feeding experiments are discussed. It is found that in incremental growth there is one and only stationary point. Simple geometric methods are given for the location of the stationary point in several common types of growth.

NUMBER 00312

Adams, T.
Body-Temperature Regulation in the Normal and Cold-Acclimatized Cat.
J.Appl.Physiol. 18(4):772-777,1963.
The role of the anterior hypothalamus as a temperaturesensible area serving a thermal regulatory input function for body-temperature control in cats living at 25 C (noncold acclimatized) or 5 C (cold acclimatized) was tested by selectively changing diencephalic temperatures in the unanesthetized animal resting at 23 C ambient temperature. Extremity and internal body-temperature and metabolic-rate responses were monitored during the induced thermal shifts. Both groups of animals showed greater peripheral vasomotr and internal body-temperature changes consequent to hypothalamic heating than cooling; no modification of these test patterns was noted as a function of whole-body cold acclimatization. The temperature-sensible anterior hypothalamic areas appear to be more influential in protecting against hyperthermia than hypothermia and their function in biothermal control does

not appear to be altered by whole-body cold acclimatization.

NUMBER 00313
Eleftheriou, B.E.
Stanley, W.C.
Influence of Testosterone Propionate and Growth Hormone on the Os Penis in the Dog.
Endocrinol. 72(1):161-164,1963.
The normal growth of the os penis was determined at 5, 10, 18, 28, and 50 weeks of age in 2 breeds of dogs, beagles and Shetland sheep dogs. In addition, testosterone propionate (50 mg/dog) was administered to beagle dogs at 3-5, 8-10, 16-18 and 48-50 weeks of age and combined with growth hormone (5 units/kg body wt) at 3-5 and 16-18 weeks of age. It was found that testosterone propionate significantly increased the length and weight of the baculum at 5 and 10 weeks of age. A significant increase in the weight of this organ resulted also with growth hormone at 5 weeks of age. When both hormones were combined, the effect at 5 weeks of age was a simple additive one.

NUMBER 00314
Greiss, F.C., Jr.
A Clinical Concept of Uterine Blood Flow During Pregnancy.
Obstet.Gynecol. 30(4):595-604,1967.
Observed hemodynamics of the gravid uterine-vascular bed indicate a widely dilated system which, at a given time in pregnancy, permits delivery of maximum uterine-blood flow per unit perfusion pressure. The bed possesses the mechanism to undergo marked vasoconstriction in response to stressful stimuli. Although clinically-induced direct augmentation of UBF is impractical, reduced UGF occurs readily in response to myometrial contractions, sympathetic or sympathomimetic stimuli, and maternal hypotension. Since the uteroplacental safety factor is indeterminable at present, preservation of fetal homeostasis seems best served by applying prophylactic principles in conjunction with known pathophysiologic responses to minimize reduction of uterine-blood flow.

NUMBER 00315
Jacobson, S.A.
A Survey of Animal Bone Tumors: Analysis of 500 Cases.
Am.J.Clin.Path. 50(5):622,1968.
Of the cases surveyed, 338 were canine, 53 were feline, 39 were equine, 2 were bovine, 22 were ovine, three were porcine, three were rodent, five were primate, one was caprine, four were cervine, one was mustellid, two were canidae other than the dog, two were felidae other than the cat, and two were unknown. Almost half of the tumors were

osteosarcomas. There were 44 chondrosarcomas and 38 ossifying fibromas; 23 were diagnosed by the author as parosteal osteoma. There were 18 benign and 2 malignant osteogenic tumors, 15 extraskeletal osteosarcomas, and 10 fibrosarcomas. The remainder included osteochondroma (solitary and multiple), chondrifying fibroma, periosteal chondroma, chondroma, chondro-osseous fibroma, nonossifying fibroma, ecchondroma, myeloma, possible Ewings sarcoma, myeloid leukemia, myelocytoma, reticulum cell sarcoma, unidentified round cell sarcoma, malignant lymphoma, hemangioma, hemangiosarcoma, aneurysmal bone cyst (benign and malignant), hemangiopericytoma, osteolipoma, liposarcoma, meningioma, neurilemmoma, neurogenic sarcoma, chondromas rodens (intermediate and malignant), giant cell tumor, eosinophilic granuloma, fibrous dysplasia, osteo- and chondrogenic mammary tumors, extraskeletal osteoma, extraskeletal osteosarcoma, extraskeletal chondroma, extraskeletal chondrosarcoma, reparative granuloma of the jaw, malignant teratoma, benign synovial tumor, and malignant synovioma. Some of these were hitherto undescribed in animals. The preponderance of malignancies and tumors in older animals corresponds to current impressions.

NUMBER 00317

Jacobson, S.A.
The Localization of Osteoplastic Sarcomas in Man and Animals.
Am.J.Clin.Path. 50(5):622-623,1968.

It has long been postulated on speculative grounds that the preponderant incidence of osteogenic sarcoma in the lower extremity of man is statistically determined. Evidence to that effect was presented. Of the author's 82 cases of human osteosarcoma, 2% were in the head, 13% in the cephalic extremity, and 68% in the caudal extremity. The only group of animals presenting a similar distribution is the rodents (rabbits included), whose relatively massive caudal extremity evinces that it too carries a disproportionate share of stress. Of 26 cases in these animals, 4% were in the head, 8% in the cephalic extremity, and 54% in the caudal. Among the domestic carnivores, the forelegs are more heavily burdened than the hind, inasmuch as they bear the weight of the chest, head, and neck, and also have to provide stability for the often violent motion of the jaws. Among 172 canine osteosarcomas, 19% were in the head, 30% were in the cephalic extremity, and 23% were in the caudal extremity. Among 22 feline cases, 44% were in the head, 17% were in the cephalic extremity, and 15% were in the caudal extremity. The domestic herbivores, like herbivores generally, spend much of their time either grazing or chewing the cud. There is, therefore, continual stress on the head, including both jaws. Of 20 equine tumors, 80% were in the head, 5% were in the cephalic extremity, and none was in the caudal extremity. Of 26 bovine tumors, 69% were in the head, none was in the cephalic extremity, and 4% were in the caudal extremity. Of four ovine tumors, two were in the head and the other two were in the sternocostal complex. Parosteal osteoma follows osteosarcoma in its patterns of localization.

NUMBER 00321
Adams, D.B.
Bacelli, G.
Mancia, G.
Zanchetti, A.
Cardiovascular Changes During Preparation for Fighting Behaviour in the Cat.
Nature 220(5173):1239-1240,1968.
The authors have analyzed cardiovascular changes in naturally elicited fighting in the cat.

NUMBER 00322
Wilkinson, G.T.
A Review of Drug Toxicity in the Cat.
J.Small Anim.Practice 9:21-32,1968.
The toxicity of drugs and therapeutic agents commonly used in feline medicine is reviewed. Included is arsenic, iodine, lead, mercury, zinc, arecoline, dichlorophen, carbamazine, male fern, methyridine, piperazine, various antibiotics and sulfonamides, tar derivatives, aspirin, barbiturates and other sedatives, hormones, pesticides, and vitamins.

NUMBER 00323
Hayward, A.H.S.
Thoracic Effusions in the Cat.
J.Small Anim.Pract. 9:75-82,1968.
The differential diagnosis of fluid effusions of the thoracic cavity of cats is considered. Special reference is made to suppurative pleurisy ("granular pleurisy"). This is characterised by the presence of granules in the exudate, similar to those described in pleural actinomycosis of carnivores. The cases described however, are apparently not due to actinomyces or Nocardia, but to a mixture of organisms, including anaerobic fuso-bacteria, spirochaetes, streptococci, Pasteurella, and a gram-positive filamentous organism. The lesion is possibly due to infection from indigenous mouth organisms and could originate from cat bites.

NUMBER 00324
Howard, E.B.
Jannke, C.C.
Immunoglobulin Disorder Associated with Feline Eosinophilic Granulomatosis.
Am.J.Vet.Clin.Path. 2:21-26,1968.

Electrophoretic analysis of serum protein distribution of 4 cats with multiple eosinophilic granulomas indicated a significant elevation of the immunoglobulin content. This is discussed in relation to the possible immunological significance of the disease. Normal protein analysis for 6 normal cats are: serum protein, 6.0 gm%; albumin, 41.4%; alpha globulin, 15.8%; beta globulin, 11.5%; gamma globulin, 26.3%.

NUMBER 00325

Ishmael, J.
Howell, J.M.
Observations on the Pathology of the Spleen of the Cat.
J.Small Anim.Pract. 9:7-13,1968.

Lesions were found in the spleen of four of sixty-three cats examined post mortem in the department, and comprised two examples of lymphosarcoma, one of chronic fibrinous peritonitis and one of subcapsular haematoma. Abnormalities were found in two cat spleens received from veterinary surgeons in general practice. In one cat the abnormalities were an haemangiosarcoma with secondary deposits in the liver and in the other extensive mast cell infiltration. In addition lesions were detected in the spleen of three of eighty-seven cats examined post mortem in general practice. The lesions were: multiple secondary deposits of adenocarcinoma from a primary tumour of the mammary gland, a ruptured spleen and a foreign body below the splenic capsule.

NUMBER 00326

Lucke, V.M.
Baskerville, A.
Bardgett, P.L.
Mann, P.G.H.
Thompson, S.Y.
Deforming Cervical Spondylosis in the Cat Associated with Hypervitaminosis A.
Vet.Rec. 82:141-142,1968.

A description of 2 cases (5-year old and 20-month old) of spondylosis in the cat evidentially causes by prolonged feeding of beef liver. Three other cats showed clinical and radiological findings highly suggestive of hypervitaminosis A, with improvement noted within a few weeks of discontinuing liver as part of the diet.

NUMBER 00327

Schirmer, R.G.
Piermattie, D.L.
The Significance of Jaundice as a Symptom in Small Animals.
Michigan State Univ.Vet. 19(1):40-43,1958.

NUMBER 00328
Laties, A.M.
Jacobowitz, D.
A Comparative Study of the Autonomic Innervation of the Eye in Monkey, Cat, and Rabbit.
Anat.Rec. 156:383-396,1966.
There is a dual innervation to both sphincter and dilatory muscles, and probably to the blood vessels of the cat iris.

NUMBER 00329
Geltzer, A.I.
Autonomic Innervation of the Cat Iris: An Electron Microscopic Study.
Arch.Ophthal. 81:70-83,1969.
An identification of individual adrenergic and cholinergic nerve terminals would appear to be possible at the ultrastructural level. It is submitted that there exists a significant dual innervation of the feline dilator muscle and to a lesser extent a dual innervation of the feline sphincter muscle. Selective degeneration experiments have been performed showing a rapid degeneration of the specific nerve terminals with sparing of the unaffected fibers.

NUMBER 00330
Stephen, E.L.
Walker, J.S.
Remmele, N.S.
Carter, R.C.
Mitten, J.Q.
Schuh, L.G.
Klein, F.
The Clinical Aspects of Rift Valley Fever Virus in Household Pets: II. Susceptibility of the Cat.
Technical Manuscript 484, Dept. of the Army, 1968, Project 1b533001d426.
Challenge with Rift Valley fever virus(RVFV) resulted in an 81% mortality in kittens 21 days of age or younger, whereas it produced only a subclinical infection in 84-day-old kittens and adult cats. Infection in the latter groups was demonstrated by the presence of serum neutralizing antibodies. Thus, kittens 3 weeks of age or younger are as susceptible as lambs and more susceptible than calves to RVFV. Other data indicated (i) the possible existence of cross-immunity between RVFV and some other, as yet unknown, entity and (ii) the possibility of both horizontal (kitten-to-kitten) and ascending (kitten-to-adult) transmission of RVFV. The epidemiological implications of the study are discussed.

NUMBER 00331
Corbin, J.E.
Puppy Production: How Many?
Purina Lab.Anim.Digest 4(4):3-5,1968.

A general discussion of the factors which influence production in various breeds of dogs. Curves are given for the efficiency of sequential litters; a mean of 6-7 pups per litter up to the 8th litter for beagles, 6-8 for the first 8 litters in pointers, and 7-9 for the first 6 litters and then decreasing to 5 per litter by the 13th litter in setters.

NUMBER 00332
Cock, E.V.
Osterodystrophy in Siamese Kittens.
Vet.Rec. 71:468,1959.

NUMBER 00333
Krook, L.
Barrett, R.B.
Usui, K.
Wolke, R.
Nutritional Secondary Hyperparathyroidism in the Cat.
Cornell Vet. 53:224-240,1963.
Roentgenologic, clinicopathologic, and morphologic data was presented showing that the nature of a cat disease, hitherto known as osteogenesis imperfecta or juvenile osteoporosis, is a nutritional secondary hyperparathyroidism. Three cats were studied, including a control. Values for the control were:serum calcium 10 mg %; serum phosphorus, 6.4 mg; serum alkaline phosphatase, 3.1 sigma units; parathyroid cytoplasm to nucleus ratio, 1.77 +/-0.19; parathyroid nuclear surface, 18.30 +/-0.61 planimeter units; parathyroid parenchyma to interstitium ratio, 6.1 +/-0.29.

NUMBER 00334
Lamb, T.W.
Ventilatory Responses to Hind Limb Excercises in Anesthetized Cats and Dogs.
Respiration Physiol. 6:88-104,1968.
In six cats and two dogs anesthetized with pentobarbital, graded electrical stimulation of intact sciatic nerves resulted in increases in total body oxygen consumption which were distributed over a range of values from the resting level to twice that amount. For the two cats and two dogs studied before spinal cord transection, ventilatory responses to increases in metabolism were such that no significant changes were observed in the arterial P subscript CO-2, pH or P subscript O-2 from values seen at rest. In these four animals and in the four additional cats all studied after lumber spinal cord transection, sciatic nerve stimulation was again associated with increases in metabolism and constancy of the arterial P subscript CO-2. When oxygen consumption was analyzed with regard to arterial P subscript CO-2 homeostasis, these relatively small changes in metabolism were found to be sufficient to quantitate the influence of limb

receptors. Although the present study gives no information about transients, it suggests that during continuing exercise, limb receptors play a small role or one which can be fulfilled by other factors.

NUMBER 00335
Kallfelz, F.A.
Comparision of I-125 T-3 and I-125 T-4 Tests in the Diagnosis of Thyroid Gland Function in the Dog.
J.A.V.M.A. 154(1):22-25,1969.
As indicators of thyroid function in dogs, comparison was made between the resin sponge uptake of labeled triiodothyronine (I-125 T-3 test) and the determination of total serum thyroxine (I-125 T-4 test). It was found that the I-125 T-4 test was very sensitive to experimentally induced increases in thyroid function in 6 dogs and to naturally occurring decreases in thyroid function in 2 dogs. In contrast, the I-125 T-3 test was found to be relatively insensitive to these changes. It appears that the I-125 T-4 test is the preferred method for precise determination of thyroid function, whereas the I-125 T-3 test, which is more convenient to do, is valuable as a screening procedure.

NUMBER 00336
Blake, J.A.
A Technique for Castrating Cats.
J.A.V.M.A. 154(1):25,1969.
A comparison of 2 common methods of approaching the problem of hemorrhage after feline castration with a suggested method which requires knotting the spermatic cord on itself.

NUMBER 00337
Iljin, N.A.
Temperature Effects on the Color of the Siames Cat.
J.Hered. 21:309-318,1930.

NUMBER 00338
Crew, F.A.E.
The Genetics of Sexuality of Animals.
Cambridge, England, 1927.

NUMBER 00339
Schnelle, G.B.
Flea Collar Safety.
J.A.V.M.A. 154(2):137,1969.
The letter writer has had little experience with expected skin problems in dogs and cats which wear flea collars.

NUMBER 00340
Barr, M.L.

Bertram, E.G.
A Morphological Distinction Between Neurones of the Male and Female, and the Behaviour of the Nucleolar Satellite During Accelerated Nucleoprotein synthesis.
Nature (London) 163:676-677,1949.

NUMBER 00341
Elzay, R.P.
Huges, R.D.
Adontia in a Cat.
J.A.V.M.A. 154(6):667-670,1969.
A clinical report of adontia in an adult cat.

NUMBER 00342
Bond, E.
Dorfman, H.D.
Squamous Cell Carcinoma of the Tongue in Cats.
J.A.V.M.A. 154(7):786-789,1969.
Squamous cell carcinoma of the tongue is reported more frequently in cats than in other domestic animals. This report contains 3 additional cases.

NUMBER 00343
Carlisle, C.H.
Penny, R.H.C.
Prescott, C.W.
Davidson, H.A.
Toxic Effects of Phenylbutazone on the Cat.
Brit.Vet.J. 124:560,1968.
The administration of phenylbutazone twice daily to five healthy cats at a daily dosage rate of 44 mg/kg bodyweight resulted in the death of four cats following thirteen to twenty doses. The fifth cat survived the 21 days of the experiment but was destroyed in extremis on day 48. Death was preceded by progressive loss of appetite, decrease in bodyweight, dehydration and severe depression, and on post-mortem examination renal disease was a constant feature. The changes observed in the peripheral blood and bone marrow are also described.

NUMBER 00344
Sinha, D.P.
Keahey, K.K.
Mostosky, U.V.
Schirmer, R.G.
Perforation of the Esophagus in a Cat.
J.A.V.M.A. 154(9):1068-1070,1969.
Esophagitis was diagnosed in a 5-month old male Siamese cat. Ulceration and perforation of the esophagus occurred, with secondary complications of acute pleurisy, pericarditis and pneumonia.

NUMBER 00345
Aitken, I.D.
McKusker, H.B.
Feline Anaphylaxis: Some Observations.
Vet.Rec. 84:58-61,1969.
Fifteen adult cats were each given an injection of 10 micrograms, 1 or 10 mg protein antigen in complete Freund's adjuvant by the footpad, subcutaneous or intramuscular route. Intravenous challenge 17-27 days later elicited shock reactions of an anaphylactic nature in 9 of the 15 cats, and in 2 cases the outcome was fatal. Of the variable symptoms observed, transient peripheral irritation and hyperactivity of the alimentary system were most common. Attention is drawn to the similarity between these experimental observations and clinically encountered feline allergies. It is considered that the apparent immunological tolerance of the cat for certain antigens, such as bovine serum albumin, may be related to continued intestinal absorption of intact proteins during adult life.

NUMBER 00346
Rich, L.J.
Kirk, B.S.
Feline Urethral Obstruction: Mineral Aspects.
Am.J.Vet.Res. 29:2149-2156,1968.

NUMBER 00347
Potkey, S.
Zinn, R.D.
Effects of Collection Interval, Body Weight, and Season on the Hemograms of Canine Blood Donors.
Lab.Anim.Care 19(2):192-198,1969.
The use of an established colony of normal donor dogs is suggested as the best means to provide whole blood required in biomedical research. It was found that dogs weighing 27 kg or more were consistently able to donate normal blood at the rate of 1 unit (approximately 500 ml) every 3 weeks for a period of 1 year. Subsequent studies have indicated that dogs of this type and size can accommodate to blood collection at this rate for at least 2 years. Hematocrit and hemoglobin values of blood samples obtained from normal control dogs were significantly higher in winter than in summer. These differences appear to be associated with seasonal variations in temperature and sunlight.

NUMBER 00348
Anon.
Laboratory Animal Feeding the Wayne Way.
Allied Mills, Inc.
A commercial publication containing the analysis of the various diets which Wayne produces for laboratory animals. Also included, are some husbandry hints for each

specie concerned. Normal values for cats include: recommended room temperature, 70-72 F; humidity, 50-55%; eats dry feed at 4-6 weeks of age; water, ad lib; adult male weight, 4-9 pounds; adult femal weight, 4-8 pounds; female and male breeding age, 6-7 months; estrus cycle is polyestrus, but varies greatly; birth weight, 125 grams; litter size, 3-8; weaning age, 6-8 weeks.

NUMBER 00349
Bito, L.Z.
Animal Restrainers for Unanesthetized Cats and Rabbits.
Lab.Anim.Care 19(2):244-246,1969.
An animal holder designed for the painless and comfortable restraining of unanesthetized cats and rabbits is described. Its use and some modifications for various experimental conditions as well as some of the author's experiences in using this restrainer are discussed.

NUMBER 00350
Crighton, G.W.
Lymphosarcoma in the Cat.
Vet.Rec. 84:329-351,1969.
In about 90% of cases of lymphosarcoma in the cat at least one of the following three clinical features is found during the clinical examination: enlarged mesenteric lymph nodes, enlargement of the superficial lymph nodes, and a space-occupying lesion in the anterior thorax. The diagnosis is confirmed by histological examination of affected tissues. A blood examination is not the diagnostic technique of choice. The disease is invariably fatal, and it is doubtful if any therapeutic measures prolong life.

NUMBER 00351
Wilkinson, G.T.
Feline Infectious Anemia.
Vet.Rec. 84:331-333,1969.
Feline infectious anemia is a disease caused by a blood parasite, Eperythrozoon felis (Hemobartonella felis), which infests the erythrocytes. The condition is usually sub-clinical, but overt clinical disease, in the form of a macrocytic, hemolytic anemia associated with a high fever, developes when the cat is subjected to stress or intercurrent disease. A blood smear should always be made for any cat showing a pyrexia of indeterminate origin, and examined for the presence of the parasite. It is possible that there are large numbers of carrier cats present among the feline population of this country. The organism seems to be susceptible to the broad-spectrum antibiotics, especially the tetracyclines. Whole blood transfusion may be required in severe cases of the disease.

NUMBER 00352
Hutchison, W.M.
Work, K.
Toxoplasma, A Versatile Parasite.
New Scientist 42(651):464-466,1969.
A short review of the knowledge about T. gondii.

NUMBER 00353
Waller, G.R.
Price, G.H.
Mitchell, E.D.
Feline Attractant, Cis,trans-Nepetalactone: Metabolism in the Domestic Cat.
Science 164(3885):1281-1282,1969.
Cis, trans-nepetalactone, the biologically active component of catnip, was force-fed to the domestic cat. When the C-14-labeled compound was fed, 86 to 94 percent of the radioactivity was recovered in the urine, 1 to 2 percent was found in the feces, and 1 to 12 percent was collected as carbon dioxide. The major (50 to 75 percent) metabolite was alpha-nepetalinic acid, which was excreted in the urine together with small amounts of dihydronepetalactone, unchanged Cis,-trans-nepetalactone, and several unidentified compounds. No marked physiological or histological effects were observed when 20 to 80 milligrams of Cis,-trans-nepetalactone was administered orally. This is the first report on the metabolism of a mammalian attractant.

NUMBER 00355
Rohovsky, M.W.
Griesemer, R.A.
Hematology of the Germfree Cat.
Lab.Anim.Care 19(1):60-62,1969.
The hematology of the germfree cat was determined from 77 cardiac blood samples from 28 juvenile cats and the differential count of bone marrow cells from 7 germfree cats. The mean results of the hemogram were: packed cell volume, 34.7+/-4.2%; hemoglobin, 11.6+/-1.5 gm/100 ml; erythrocytes, 8.02+/-1.03 million//cmm; mean corpuscular volume, 43.2 cmicrons; mean corpuscular hemoglobin, 14.4 micromicrogm; mean corpuscular hemoglobin concentration, 33.4 %; leucocytes, 12549+/-3011/cmm; segmented neutrophils, 3163+/-912/cmm; band neutrophils, 20, range 0-180; lymphocytes, 8506+/-2162/cmm; eosinophils, 825+/- 338/cmm; and monocytes, 21, range 0-180. The mean values of differential counts of bone marrow cells were: myeloblasts, 5.07+/-0.28%; progranulocytes, 9.89+/-0.51%; myelocytes, neutrophilic, 4.60+/-1.15%; myelocytes, eosinophilic, 1.14 +/-0.18%; neutrophilic metamyelocytes, 10.54+/-1.03%; eosinophilic metamyelocytes, 0.68+/-0.25%; band neutrophils, 11.61+/-0.42%; eosinophilic bands, 0.46+/-0.20%;segmented neutrophils, 9.50+/-0.55%; total myeloid, 53.6+/-0.41%; rubriblasts, 2.25+/-0.29%; prorubricytes, 15.14+/-0.66%; rubricytes, 16.32+/-0.59%; metarubricytes, 11.00+/-1.02%;

and total erythroid, 44.7+/-0.75%. The mean
myeloid:erythroid ratio was 1.2+/-0.02.

NUMBER 00356
Lucke, V.M.
Diseases of the Urinary System of the Cat.
Vet.Rec. 84(13):325-329,1969.
An Excellent review of the clinical aspects of kidney disease, cystitis, and urethral obstruction in the cat.

NUMBER 00357
Mendham, J.H.
Roszel, J.F.
Bovee, K.C.
Clinico-pathologic Conference: Hepatic Cystitis in a Cat.
J.A.V.M.A. 154(8):935-944,1969.
A 9-month old Siamese tom with abdominal distension is discussed as a case example.

NUMBER 00358
Will, J.A.
Subvalvular Pulmonary Stenosis and Aorticopulmonary Septal Defect in the Cat.
J.A.V.M.A. 154(8):913-916,1969.
A case of congenital cardiac anomalies in a mature female cat.

NUMBER 00359
Hague, P.H.
Burridge, M.J.
A Meningioma in a Cat Associated with Erosion of the Skull.
Vet.Rec. 84:217-219,1969.
A large meningioma is described in an aged cat. Erosion of the parietal and frontal bones occurred, allowing protrusion of the neoplasm through the roof of the skull. Theories on the etiology of the erosion of bone by this tumor growth are cited.

NUMBER 00844
Kayan, S.
Mitchell, C.L.
The Effects of Chronic Morphine Administration in Tooth Pulp Thresholds in Dogs and Cats.
Proc.Soc.Exp.Biol.Med. 128:755-760,1968.
The effects of acute and chronically administered morphine on the threshold voltage required to elicit a response to tooth pulp stimulation in the dog and cat are quantitatively compared. A single dose of morphine elevated tooth pulp thresholds to a greater extent in dogs than in cats. After chronic administration a decrease in the threshold occurred

in cats but not in dogs. In the latter, a tolerance to (but not a reversal) of the threshold elevating effect was observed. Tolerance was seen to the overt depressant effects of morphine in dogs but not to the overt excitatory effects in cats. Studies concerned with attempts to delineate the reason(s) for these differences may be useful in advancing our knowledge concerning the mechanisms resonsible for the analgesic effect of morphine and the development of tolerance to this drug.

NUMBER 00845

Gilmore, C.E.
Gilmore, V.H.
Jones, T.C.
Reticuloendotheliosis, a Myeloproliferative Disorder of Cats: a Comparison With Lymphocytic Leukemia.
Path.Vet. 1:161-183,1964.

Leukoproliferative diseases are common in cats and involve a variety of cell types. One such disorder, an anatomical entity of unknown etiology, is characterized by severe progressive anemia and proliferation of undifferentiated (reticulum) cells in bone marrow, spleen, liver and lymph nodes. Malignant behavior of the abnormal cells is not obvious, and the descriptive term, reticuloendotheliosis, is suggested for the disorder until the etiology is known. Clinical, hematological and post mortem findings in 10 cats with reticuloendotheliosis are compared in this report with 10 cats with lymphocytic leukemia. Clinical findings are not distinctive and are similar in both conditions, but the diseases can be distinguished by hematologic and post mortem studies. Cats with reticuloendotheliosis are characterized by persistence of totally undifferentiated cells in peripheral blood and bone marrow. Between 15.7 and 78.8% of these cells were found in the bone marrow and upto 55% in the peripheral blood. No intermediate stages, suggesting development toward a more specific cell type, were found. Gross findings at necropsy in cats with reticuloendotheliosis were anemia and enlargement of the spleen, liver and lymph nodes. Reticulum cells were diffusely distributed in vascular or lymphatic spaces in each of these organs. The cells were individually discrete and did not form solid masses. Cats with lymphocytic leukemia had high proportions of lymphocytic cells in the blood and bone marrow. The neoplastic cells obliterated the normal architecture of lymph nodes and frequently formed solid masses in other tissues. Hematologic and post mortem findings in some previously reported cases of leukemia in cats which were characterized by proliferation of poorly differentiated cells have some similarities to those in cases of reticuloendotheliosis.

NUMBER 00846

Hetzko, D.
(Postnatal Increase of the Capillary Density in the

Corpus Callosum of the Cat.)
Zetschrift f.Anat. u. Entwicklungs. 127:138-144,1968.
Postnatal changes of capillary density have been determined in paraffin sections through the corpus callosum of 19 cats. At birth the capillary density amounts to 0.81 vol-%. In the 2nd week of postnatal life it begins to increase and reaches a maximum of 2.92 vol-% in the 5th week. From the 6th week onwards there is an initially steep and later on less pronounced decrease until an age of about 1 year a value of about 1.5 vol-% is reached, which is maintained for life. The decrease in the percentace of capillary volume seen after the 5th week is caused by the rapid increase in fibrous material due to myelinization.

NUMBER 00847
705,707
Iturrian, W.B.
Fink, G.B.
Effect of Noise in the Animal House on Seizure Susceptibility and Growth of Mice.
Lab.Anim.Care 18(5):557-560,1968.
Sound-induced convulsions continue to be a subject of great interest. It is possible to produce a high incidence of sound-induced convulsions in mice without the use of genetically susceptible strains, dietary, chemical or surgical manipulations. Seizure susceptibility in weanling Cf#1 mice depend on the interval between first and second exposure to sound. Proper selection of age for audio-conditioning and the condition test interval produces seizures of predictable incidence and severity. However, housing conditions during the experiment are most important. A routine fire drill, a busy telephone, noise from garbage cans or metal cages, electric drills and barking dogs are examples of extraneous sounds that markedly change the incidence and severity of the convulsions observed. The audiosensitive period and the growth rate are influenced by various sounds generated in the animal room. Thus, environmental conditions must be rigid in control in such investigations if the results are to be reproducible. Two difficult problems are raised by the data. One is the question of the mechanism(s) involved in the resonse to stress that developes the facilitated audio-sensitivity. The other is whether the noise of metal equiptment being banged about is a more serious disadvantage than has been generally recognized.

NUMBER 00848
Harris, M.
Intussusception in the Cat.
Vet.Rec. 83:196-197,1968.
A clinical description of occurrence of intussusception in a year-old siamese male cat. Five noteworthy aspects of this case are made: 1. possibly 12 days between initial symptoms and surgical reduction of abnormality, 2. a period of possibly 3 days of normality during the illness,

3. infrequency of vomiting, 4. absence of adhesions or gross pathological changes in the affected bowel, 5. complete bowel obstruction never seemed to exist.

NUMBER 00849

Collins, J.D.
Neumann, H.J.
Feline Infectious Anemia: a First Case.
Irish Vet.J. 22:88,1968.

This communication reports the clinico-pathological features of the first recorded case of feline infectious anemia in Ireland. The subject was a 5-month old Burmese cross neutered male cat. The presenting signs were a history of a "fit" on 2 successive days, muscular weakness, spleno- and hepatomegaly, pale and slightly icteric mucous membranes, a low venous blood pressure and tachycardia. Hematological examination revealed a PCV of 17, with icteric plasma, anisocytotic erythrocytes with 48 reticulocytes per 100 red blood cells, macrocytosis and polychromasia. Polychromatic metarubricytes, normochromic metarubricytes and rubricytes made up 4.0, 11.5 and 1.5% of the differential nucleated cell count, respectively, indicating an acute anemia in remission; 65% of the erythrocytes contained basophilic inclusions morphologically indistinguichable from Eperythrozoon felis, appearing as coccoid or annular structures, 0.5-1.5 microns in diameter, and randomly distributed throughout cells. Irregularly beaded bacillary structures, upto 3.0 microns in length, were observed in a smaller number of erythrocytes, and discoid inclusions appeared to be attached at the periphery of some of the cells in a number of fields. Treatment consisted of an initial injection of 180 mg of chloramphenicol and 500 mg Vit. B12, followed by 3 daily injections of 150 mg chloramphenicol, and a further 7 days of twice daily oral dosage with 0.1g chloramphenicol. The cat was also given Vit. B-complex orally, and apparently made a complete recovery. Two older cats in the same household showed no signs of the infection, and none of the 3 cats showed the presence of ectoparasites despite repeated examinations.

NUMBER 00850

Palmer, N.C.
Osteodystrophia Fibrosa in cats.
Aust. Vet.J. 44:151,1968.

This article reviews the literature of osteodystrophia fibrosa in the cat and describes the etiology, histopathology, clinical signs and treatment of the condition. The essential cause of the disease is the feeding of low calcium/high phosphorus diets, usually fresh meat and water producing a hypocalcemia and hypophosphatemia. The former stimulates the secretion of parathormone from the parathyroids causing widespread bone resorption by osteolysis and osteoclasis and the development of fibrous tissue and numerous ineffectual osteoblasts within the bone. There is increased absorption of dietary calcium from the gastrointestinal tract, and decreased resorption of phosphate by the renal tubules. Continuing lack of dietary calcium leads to parathyroid hyperplasia & generalized bone resorption. The author speculates upon the role of iodine deficiency in the pathogenesis of the condition as it has been shown that additional iodine to the diet delays the onset of the disease in experimental cases. It is suggested that a normal level of iodine is necessary for the activation of thyrocalcitonin, the hypocalcemic, hypophosphatemic factor produced by the thyroid. The histopathological changes are seen in the parathyroids and the bones. The parathyroids undergo hypertrophy and hyperplasia with a predominance of light chief cells and small water clear cells which show a tendency to form acinar arrangements. Osteoclasis is evident in the bones, and although osteoid tissue is produced by the numerous osteoblasts, covering the spongiosa in layers 2 or 3 cells deep, mineralization is delayed or does not occur. The epiphyseal plates are normal in width and differentiation and vascular invasion of the cartilage proceeds in the normal way, thus differentiating the condition from rickets. The early clinical signs are slight anorexia, nervousness, hyperexcitability and rapid respirations. The kittens are disinclined to move and may show lameness in one or both hindlegs, weakness and posterior paraplegia. There are often fractures of the ribs, vertebrae and long bones, usually of the "folding" variety, and deformities of the sternum, pelvis, long bones, scapulae and vertebral column are common. Treatment essentially consists of the correction of the Ca:P ratio of the diet and complete rest. If the cat will not accept the changes to a balanced diet, the addition of 0.5 g calcium carbonate/100 g fresh meat and one drop of a solution containing 65 mg potassium iodine per 100 ml water to the food will prove effective. Vit. D should be given only when the ca:p ratio has been corrected. Thirty-three references are quoted.

NUMBER 00851

Worden, A.N.
Abnormal Behaviour in the Dog and Cat.
Vet.Rec. 71:966-978,1959.
Behavior patterns in domestic dogs and cats are discussed with social reference to reproduction, the young animal, predation, eating and drinking, agonistic and social behavior and senescence, and in appropriate circumstances comparisons are made with wild ancestors or counterparts. Normal and abnormal behavior are discussed in relation to experimental work involving dogs or cats and to the management and diseases of pet animals, with special reference to training, senility and the changes that may result from infectious disease and physical injury.

NUMBER 00852
Osborne, C.A.
Low, D.G.
Perman, V.
Barnes, D.M.
Neoplasms of the Canine and Feline Bladder: Incidence, Etiologic Factors, Occurrence and Pathologic Features.
Am.J.Vet.Res. 29(10):2041-2055,1968.
In a survey of 130 vesical neoplasms of dogs, transitional cell carcinomas were the most frequently seen neoplasm, and they had a great tendency to metastasize. Papillomas were the next most frequently occurring urinary bladder tumor, and tumors of nonepithelial origin occurred less frequently. A rhabdomyosarcoma was found in the urinary bladder of a 5-yr old male St. Bernard dog. Of the 9 urinary bladder neoplasms reported 2 were papillomas, 2 transtional cell carcinomas, 1 papillomatous carcinoma, 1 adenocarcinoma, 1 unclassified epithelial tissue carcinoma, 1 myxomatous type and 1 leiomyoma; all were primary sites. In the cat there seemed to be no sex predeliction and a defined occurrence in mature and old animals.

NUMBER 00853
Brown, A.M.
Motor Innervation of the Coronary Arteries of the Cat.
J.Physiol. 198:311-328,1968.
The effect on coronary resistance of selective stimulation of the A-delta, B and SC fibre groups of the post-ganglionic cardiac sympathetic nerves were studied. The main left coronary artery was perfused at constant flow. The oxygen saturation of coronary sinus blood was measured continuously. Stimulation of the peripheral ends of the cut A-delta afferent fibres, normally excited by myocardial ischemia, had no effect on coronary vascular resistance; these fibres do not evoke an axon reflex in the heart.

NUMBER 00854
Ackart, R.J.
Shaw, J.S., Jr.
Lawrence, J.S.
The Blood Cell Picture of Normal Cats.
Anat.Rec. 76:357-363,1940.
Cats 3 or more months of age were used in this study. Red blood cell counts were done on 45 cats, hemoglobin and reticulocyte counts on 20, hematocrit (from blood taken via cardiac puncture) and Wintrobe indices on 10, white blood cell counts and differentials on 100 cats (826 observations). The following values are the range, the mean, and ,if given, the probable error: red blood cells, in millions per cmm, 4.60-9.71, 7.24, 0.77; reticulocytes in %, 0.07-1.10, 0.32, 0.20; hemoglobin in grams per 100 cc, 8.70-14.55, 11.22, 1.17; hematocrit in %, 28.50-47.0, 40.15, 3.47; mean corpuscular volume in cubic microns,

41-58, 50.00, 3.29; mean corpuscular hemoglobin in micro micro grams, 12-18, 15.50, 1.24; mean corpuscular hemoglobin concentration in %, 29-34, 31.00, 0.92; basophils in %, 0-0.4, 0.01; eosinophils in %, 2-31, 8, 3; neutrophils in %, 35-79, 59, 6; lymphocytes in %, 11-52, 32, 6; monocytes in %, 0-4.0, 0.7; degenerated cells in %, 0-2.0, 0.2; white blood cells per cmm, 5600-28900, 15000, 3400; basophils per cmm, 0-60, 2; eosinophils per cmm, 100-8500, 1300, 900; neutrophils per cmm, 3300-19600, 9100, 2700; lymphocytes per cmm, 1500-12000, 4900, 1500; monocytes per cmm, 0-350, 100, 60; degenerated cells per cmm, 0-300, 25.

NUMBER 00856

Vaiman, M.
Dubiez, R.
Colson, X.
Nizza, P.
(Hematological Data on the Pig, for Use in Radiobiology Blood Cytology).
Revue Med.Vet. 119:129-138,1968.

The blood cytology of 79 newborn piglets, 82 piglets at weaning (35 days old), and 83 young adult pigs aged 5-7 months, was recorded. New-born piglets showed an ave. RBC count of 4.9 million/cmm, WBC 10,000/cmm, mean corpuscular volume 63 cubic microns, hematocrit 31.3%; piglets at weaning showed RBC 5.43 millions/cmm, WBC 17,600/cmm, MCV 62.5 cubic microns, hematocrit 32.5%; and pigs from 5-7 months of age showed RBC 6.7 millions/cmm, WBC 18000/cmm, MCV 60 cubic microns & PCV 42%. The granulocyte/lymphocyte ratio diminishes from 3 at birth to 0.9 at weaning and 0.6 at 5-7 months.

NUMBER 00857

Taketa, F.
Smits, M.R.
Lessard, J.L.
Hemoglobin Heterogeneity in the Cat.
Biochem.Biophys.Res.Commun. 30:219-226,1968.

The two hemoglobins previously reported in cat blood (Biochem.Biophys.Res.Commun. 24:705,1966) contain identical alpha, but different non-alpha (beta) subunits. Both contain 8 free -SH groups and treatment with mercaptoethanol did not change their relative concentration. No evidence was obtained for the derivation of one polymer from the other by the formation of disulphide linkages.

NUMBER 00858

Anon.
Report of the New York State Veterinary College at Cornell University for the Year 1966-1967.
New York, Cornell University, 1968.

Administrative reports and details of the research activities of departments were given. The latter included the following subjects; anatomy: growth and development of the sheep fetus; anatomy of the Budgerigar; clinical neurology of small animals; canine clinical cerebral angiography; and ATP activity of the bovine rumen. microbiology: pathogenesis of canine distemper; antilymphocyte serum in dogs; interferon; allergy in domestic animals; canine abortion, I.B.R. and other respiratory viruses; feline viruses; mycoplasma. pathology: canine brucellosis; herpes virus encephalitis in dogs; leukemia in dogs; physical biology: transfer of radionuclides in milk; radioactive contamination of the food chain; Vit.D; calcium metabolism; clinical use of radionuclides in veterinary medicine. surgery: autoimmune testicular degeneration; embryology; leukocyte culture; and other studies.

NUMBER 00859
Merdivenci, A.
(Biphenium Hydroxynaphthoate Treatment of Dogs and Cats Infected With Uncinaria Stenocephala).
Etlik Vet.Bakt.Enstit.Derg. 3:67-71,1966.
The drug at 20-25 mg/kg was nearly 100% effective in clearing hookworm infections from dogs and cats.

NUMBER 00860
Waddell, A.H.
Anthelmintic Treatment for Capillaria Feliscati in the Cat.
Vet.Rec. 82:598,1968.
Methyridine given by mouth to cats at a dose of 200 mg/kg was highly efficient against C.feliscati in the urinary bladder. Side effects were transitory and appetite appeared to be normal within 12 hours.

NUMBER 00861
Waddell, A.H.
Further Observations on Capillaria Feliscati Infections in the Cat.
Aust.Vet.J. 44:33-34,1968.
In a survey of 100 cats, 31 were infected with the nematode (in the urinary bladder). No injury to the bladder was observed macroscopically. There appeared to be no significant inflammation microscopically. The slight increase in the number of epithelial cells passed in the urine of infected cats is attributed to the superficial attachment of the adult worm to the mucosa of the bladder. The light infections seen in this investigation were of low pathogenicity for the cat.

NUMBER 00862
Hamilton, J.M.

Cats Experimentally Infected With Lungworm. An Assessment of the Value of Diethylcarbamazine.
Vet.Rec. 82:433-435,1968.
The value of diethylcarbamazine for the removal of Aelurostrongylus abstrusus was tested in artificially infected cats. Six cats were given 3 daily doses of the citrate at the rate of 100 mg/kg on 2 occaisions with a 3 day interval. Two cats were untreated controls. There was a reduction in the number of larvae excreted in the feces after the first course of treatment, but after the second an increase occurred. At P.M. examination similar lesions were seen in the treated and control cats. It was concluded that the treatment was of little value for the removal of patent lungworm infections from cats.

NUMBER 00863
Dorn, C.R.
Taylor, D.O.N.
Frye, F.L.
Hibbard, H.H.
Survey of Animal Neoplasms in Alameda and Contra Costa Counties, Cal.: Methodology and Description of Cases.
J.Natn.Cancer Inst. 40:295-305,1968.
A survey of spontaneous neoplasms in dogs and cats was conducted in Alameda and Contra Costa Counties, California. Veterinarians reported cases they observed to a central registry and submitted specimens for microscopic examination. In return for case reports, veterinarians received histopathologic diagnoses. After a pilot study in 8 practices, the study was expanded to 65 practices in the 2 counties and 11 practices in the surrounding counties. During 3 years of reporting, 5,647 newly diagnosed neoplasm cases (2,174 malignant and 3,473 benign) were recorded. Of all neoplasms, 4,842 were from dogs, 621 from cats, and 184 from other domestic animals. In dogs, 34% of all neoplasms were malignant, while in cats 72% were malignant. The skin, including neoplasms of subcuatneous connective tissues and malignant melanomas of the skin, was the most common site of cancer reported in both dogs and cats. Mammary cancer was the next most common malignancy in dogs. Lymphosarcomas comprised a greater proportion of all malignant neoplasms of cats than of dogs.

NUMBER 00864
Dorn, C.R.
Taylor, D.O.N.
Schneider, R.
Hibbard, H.H.
Klauber, M.R.
Surveys of Animal Neoplasms in Alameda And Contra Costa Counties, California. II. Cancer Morbidity in Dogs and Cats From Alameda County.
J.Natn.Cancer Inst. 40:307-318,1968.
In a survey of spontaneous neoplasms in dogs and cats,

veterinarians reported cases they observed to a central registry and submitted specimens for microscopic examination. During 3 years of reporting, 5,647 newly diagnosed neoplasms cases (2,174 malignant and 3,473 benign) were recorded. Of all neoplasms, 4,842 were from dogs, 621 from cats & 184 from other domestic animals. In dogs, 34% of all neoplasms were malignant, while in cats 72% were malignant. The skin, including neoplasms of subcutaneous connective tissue and malignant melanomas of the skin, was the most common site of cancer reported in both dogs and cats. Mammary cancer was the most next common malignancy in dogs. Lymphosarcomas comprised a greater proportion of all malignant neoplasms of cats than of dogs. The estimated annual incidence rates for cancer of all sites were 381.2/100,000 dogs and 155.8/100,000 cats. The annual incidence rate in human residents in the county was exceeded by the comparable canine rate and both human & canine rates were over twice the feline rate. Male dogs had a greater risk of developing cancer of the mouth & pharynx than females. Male cats had a greater risk of lymphosarcoma than females. Neutering had a significant sparing effect on mammary cancer developement; both intact female dogs & cats had about a 7-fold greater risk of having mammary cancer than neutered of the same species. Purebred dogs were significantly over-represented in cases of skin malignant melonoma and mammary cancer. The boxer breed had a significantly higher risk than other purebred dogs of developing malignant melanoma of the skin, other skin malignancies and cancer of connective tissue. Alsation dogs had a greater risk of developing oral and pharyngeal cancer. Chihuahua dogs and Siamese cats were significantly under-represented among skin cancer cases (melanomas excluded). Animal cancer models for studying brest cancer in women, genetic effects upon carcinogenesis, and human leukemia are discussed.

NUMBER 00865

Gal, I.
Kirman, B.
Stern, J.
Hormone Pregnancy Tests and Congenital Malformation.
Nature 216(5110):83,1967.

One hundred mothers of babies born with meningomyelocele or hydrocephalus provided histories of the relevant pregnancy and also from one hundred mothers recently delivered of healthy babies. Nineteen mothers of the affected pregnancy group and 4 of the control mothers reported having received oral tablets for the diagnosis of the pregnancy (most commonly "Primodos" or "Amenorone Forte"). The possibility cannot be excluded that the difference significant at the 1% level between the two groups of mothers whom we questioned might emerge purely by chance. Our observations indicate the need for a more detailed scrutiny of the role of hormonal preparations in the causation of congenital malformations, particularly when taken in the organogenic stages of pregnancy.

NUMBER 00866
Lombard, L.S.
Fortna, H.M.
Garner, F.M.
Brynjolfsson, G.
Myelolipomas of the Liver in Captive Wild Felidae.
Myelolipomas of the liver were reported in 7 captive wild Felidae, 4 of which also had microscopic myelolipomatous lesions in the spleen. Out of approximately 25,000 animals examined, these were the only myelolipomas of the liver to be found. Previously unreported in man or animals, myelolipomas of the liver are comparable to those in the human adrenal.

NUMBER 00867
205,410,505,507,515,516,517,701,702,703,704,705
Errara, M., Edit.
Forssberg, A., Edit.
Mechanisms in Radiobiology.
Academic Press, New York, 1960.
A multi-volume comprehensive treatise, by many renowned contributors, reviewing the mechanisms of radiobioeffects.

NUMBER 00868
Bergstrom, S.
Prostaglandins: Members of a New Hormonal System.
Science 157(3787):382-391,1967.
A review of prostaglandins, their isolation, structure, occurrence, metabolism, biosynthesis, circulatory system action metabolic action.

NUMBER 00869
Riach, I.C.F.
Ossification of the Sterum as a means of Assessing Skeletal Age.
J.Clin.Path. 20:589-590,1967.
The centers of ossification of the sterum were investigated to determine whether there was any correlation between ossification in the sternum and chronological age. But this proved to be of no value in assessing skeletal age, although it may be of use in assessing maturity for pathological or forensic purposes.

NUMBER 00870
Bradfield, R.B.
Bailey, M.A.
Margen, S.
Morphological Changes in Human Scalp Hair During Deprivation of Protein.
Science 157(3787):438-439,1967.
Human subjects were deprived of protein for 15 days, after

which time hair from the scalp of each subject was plucked and examined. Both bulb and external root sheath showed morphological changes. This technique may therefore be useful in diagnosing protein-calorie malnutrition.

NUMBER 00871

Brent, R.L.

Production of Congenital Malformations Using Antisera. III. Placental Antiserum.

Proc.Soc.Exp.Biol.Med. 125:1024-1029,1967.

Rabbit anti-rat placental serum is a potent teratogenic agent when injected into pregnant rats. It produces fetal growth retardation, fetal death and malformations. In these respects, it cannot be differentiated from anti-rat-kidney antiserum. Kidney and placental antisera have precipitin bands in common and the tissue antigens of kidney can protect against the effects of either antisera. Although this cannot be stated with absolute certainty, it seems likely that there are one or more identical antibodies responsible for teratogenesis in kidney and placental antisera.

NUMBER 00872

Page, E.W.

Some Evolutionary Concepts of Human Reproduction.

Obst.Gyn. 30(3):318-325,1967.

Using some examples of comparative physiology and placentation, the author does not know if he can conclude that evolution has served man well in the design of our placenta. But the phylogenetic development of the human placenta has not proceeded without the serious disadvantages of a precocious birth, cephalic disproportion, postmature labors, and others.

NUMBER 00873

Ferm, V.H.

The Use of the Golden Hamster in Experimental Teratology.

Lab.Anim.Care 17(5):452-462,1967.

The golden hamster possesses some unique reproductive features which make it an attractive animal for research in teratology. These features include: the ease of obtaining accurately timed matings, its large litter size, and its short gestation period. Techniques for obtaining timed matings, introduction of teratogenic stimuli, and methods for recovery of early embryos are described. The rapid differentiation of the hamster embryo during the 8th day of gestation makes this period a particularly useful and appropiate time for the study of teratogenic stimuli.

NUMBER 00874

Anon.

Your Cat's Care and Comfort.
Ralston Purina Co.,1966.
A 23-page pamphlet for the new cat owner. Includes general information as to breeds, general care and feeding, disease symptoms of non-specific nature and first-aid tips. Pictures of purbreds are very good.

NUMBER 00875

Anon.
Cat Care, Management and Feeding.
Lab.Anim.Digest 3(1):3-6,1967.
Empirical techniques of husbandry of kittens and adults are given for housing and general nutrition.

NUMBER 00876
Jackson, O.F.
Sutor, D.J.
Ammonium Acid Urate Calculus in a Cat With a High Uric Acid Excretion Possibly Due to a Renal Tubular Reabsorption Defect.
Vet.Rec. 86:335-337,1970.
The first case of an ammonium acid urate calculus in a cat has been found in a spayed female. The stone has a very unusual nucleus of quartz and calcite, thought to be of a foreign origin. Plasma and urinary uric acid determinations indicate the possibility of a renal tubular reabsorption defect in this cat similar to that in the Dalmation.

NUMBER 00877
Taylor, D.M.
Feline Haemobartonellosis.
Vet.Rec. 86:357-358,1970.
Clinical courses of 3 cases of H.felis (2 in Australia, 1 in Malawi). The author recognizes 2 forms: 1.acute, with pyrexia usually more than 104 degrees F, anemia, splenomegaly, no jaundice; 2. less acute or chronic, pyrexia usually less than 104 degrees F., no splenomegaly and jaundice.

NUMBER 00878
Tyler, S.A.
Norris, W.P.
An Algorithm for Selecting Acceptable Animals From a Colony of Beagles.
Growth 32:235-253,1968.
A quantitative method is presented for determining the age at which selection of acceptable animals from a heterogenous population leads to minimal costs of husbandry. The criterion for selection is based on the status of an animal relative to the variability permitted a single observable or measurable variable. A 2-stage

culling procedure is adopted. Three utility matrices are assumed with elements that constitute a measure of either general consistency or specific compatibility. The method is applied to a colony of 142 male and 153 female beagles using the 0.5 sigma interval for gross weight as criterion of acceptance. A first cull at approximately 100 days of age of roughly 45% of each sex achieves minimum cost with each of 3 definitions of utility employed.

NUMBER 00879
Christensen, D.
Smith, W.R.
Haley, T.J.
Spectral Analysis of the Electrical Activity in the Cat's Visual System After X-irradiation.
Rad.Research 39:413-420,1969.

Effects of X-irradiation on integrative patterns between EEG activity in different visual systems structures was investigated in cats using the method of multiple spectral analysis. The statistical parameters studied were pair-wise coherence, multiple coherence components, and multiple regression coefficients. Significantly high coherence, reflecting shared activity in the visual cortex and the lateral geniculate or superior colliculus during photic stimulation but not prior to it. Strong linear activity relationships were found to a lesser extent between the visual cortex and the mesencephalic reticular formation and centre median. No mutual activity generally occurred between the hippocampus and the visual cortex. Four hundred R head irradiation had a marked but transient effect on the coherence functions. The lateral geniculate had almost no linearly shared activity with the visual cortex from 1-4 hours post-irradiation. Other structures showed a decrease during this period. While in general no significant coherence levels were found individually with the various structures and the visual cortex, the optimum linear combination of activity as measured by multiple coherence did show a significant value at the flash frequency. Analysis of the components indicated a summing effect from essentially all of the structures other than the lateral geniculate.

NUMBER 00880
Bridgman, C.F.
The Structure of Tendon Organs in the Cat: A Proposed Mechanism for Responding to Muscle Tension.
Anat.Rec. 169:209-219,1968.

By reconstructing tendon organs in detail from serial cross sections, a prediction is made on how these sensors might affect their nerve endings during changes in tension at musculotendinous junctions. Tendon organs are composed of specialized encapsulated fascicles of dense collagen which are offshoots from the primary tendon of origin or insertion of muscle. Fascicles project into the muscle mass on their way to becoming attached to a bundle of extrafusal muscle fibers. The main spur of dense collagen rapidly divides into 9 bundles with septa between. Within this encapsulated region, branches of the entering sensory nerve intertwine among the fine bundles reorganize again into heavy, dense bundles before insertion of extrafusal muscle fibers. The hypothesis is presented that the spaces between collagen bundles in a relaxed tendon organ might spread open reducing pressure upon nerve endings lying between; during tension, these bundles would straighten and crowd together, leading to compression of nerve endings would excite electrochemical events in sensory axons; thus, tension information would be coded and transmitted to the central nervous system. The arrangement of a tendon organ in series with muscle fibers would imply that the organ sampled tension primarily of that group of extrafusal muscle fibers attaching to the organ.

NUMBER 00881

Clark, L.
Seawright, A.A.
Generalised Amyloidosis in Seven Cats.
Path.Vet. 6:117-134,1969.
Seven cases of generalised amyloisosis in the cat, occuring in 100 consecutive cat autopsies, were studied pathologically. Tissues from 2 of the cats were further investigated using the electron microscope. None of the cats had suffered from a prolonged infection, but had had chronic allergic dermatitis. In 6 of the 7 cats chronic hypervitaminosis A coexisted with generalized amyloidosis. It is suggested that chronic hypervitaminosis A, which causes prolonged stimulation of the reticuloendothelial system, may have predisposed to the high incidence of generalized amyloidosis reported in this paper.

NUMBER 00882

Muller, G.H.
Flea Collar Dermatitis in Animals.
J.A.V.M.A. 157(11):1616-1626,1970.
The author reviews the literature on dichlorous-impregnated polyvinyl chloride flea collars and its effects on contacted skin of cats and dogs. Four grades of flea collar dermatitis are described, each with a case history. Pathology, treatment, possible causes of the condition, and prevention are discussed.

NUMBER 00883
Albert, R.A.
Lesions of the Ocular Fundus Associated With Systemic Disease.

J.A.V.M.A. 157(11):1635-1639,1970.
Lesions of the ocular fundus commonly associated with systemic disease may be observed with the direct ophthalmoscope. These lesions may have significant diagnostic and prognostic value related to vision and outcome of the disease. Fundic changes may be characteristic of a disease, but in most instances they are not pathognomonic. As knowledge of the incidence of ocular fundic lesions in the cat and dog increases, the value of the ophthalmosopic examination will grow.

NUMBER 00884
Van der Gulden, W.J.I.
Janssen, F.G.J.
(Salmonella in Dogs and Cats Brought for Experimental Purposes).
Tijdschr.Diergeneesk. 95:495-497,1970.
During the period from March 1,1969, to December 1,1969, samples of the bowel contents were taken from 40 dogs in the Central Animal Laboratory in Nijmen, samples of the faeces being collected from 300 dogs and 150 cats by anal swabs. In the latter group of animals, Salmonella was isolated from a dog in six cases and from a cat in 1 case.

NUMBER 00885
Stara, J.F.
Waldron-Edward, D.
Repressive Action of Sodium Alginate on Absorption of Radioactive Strontium and Calcium in Cats.
Diagnosis and Treatment of Deposited Radionuclides, Proceedings of a Symposium held at Richland, Wash., U.S.A. 15-17 May 1967:340-354,1967 Excerpta Medica Foundation.
These experiments demonstrate that alginate added to a regular diet significantly suppresses absorption of strontium in cats. The suppression was most successful when the animals received the supplement at approximately the same time as the radioactive dose. Ingested sodium alginate also removed radiostrontium which had been resecreted into the intestinal tract from the endogenous cycle. The effect was seen in cats which had received a single intravenous dose; body burden of chronically labelled cats was reduced more slowly to about the same extent. Fetal body burden with radioactive strontium derived from the maternal diet, was reduced very effectively; the body burden of neonatal kittens from a dam receiving sodium alginate, as well as radioisotope, was 80% less than in an earlier litter from the same mother on a similar strontium feeding regime, but without sodium alginate additive. Sodium alginate in the diet also removed stable strontium preferentially, as can be seen in the proportion of Sr++/Ca++ in femurs and teeth. In cats fed with sodium alginate for 260-300 days, the bones of experimental animals contained one-half the stable strontium found in control animals. The long lived fission

product, 90Sr, is equally affected by sodium alginate as the shorter-lived isotopes. Autoradiograms of the femurs of cats fed with 90Sr for four weeks indicated a reduction of as much as 80% in animals receiving alginate. Health of the animals and the mineral distribution in bone was not adversely affected by the alginate supplement for the duration of the experiments.

NUMBER 00886

Chapman, V.A.
Zeiner, F.N.
The Anatomy of Polydactylism in Cats With Observations on Genetic Control.
Anat.Rec. 141(3),1961.

A study of polydactyly in cats was made to provide precise anatomical information and to correlate this with hereditary mechanisms. The 8 antomical types found were examined by X-rays and dissections, and dorsal and ventral photographs were taken for further study Thirty-one cats were utilized. It was found that, although several types of polydactylism could be described, one duplication was common to all types. This involved skeleton, musculature, and innervation of the second digit and was the type present in the male who fathered all of the litters. To this basic variation was added a distal splitting of the lateral second metatarsal or metacarpal in some types, duplication of the 4th digit in others, and an "integumental" digit, composed only of skin and a claw, in still others. Homology was seen in two of the types between fore and hind feet. In some animals one type was found in the fore-feet and a different type in the hind feet. In two cases each of the feet showed a different type. Greater variation was found in the hind feet than in the two fore-feet. Crosses were made using a polydactylous male, two females of differing polydactylous types, and a normal female. The basic pattern of the male persisted in all polydactylous offspring, but additional variables were added to it. It became obvious that polydactyly is not caused by a recessive gene in cats. Although simple dominance serves to explain the general trait, a more complex genetic explanation is needed to account for the several varieties of polydactyly. The possibilities of variation of uterine environment and of activity of modifying genes are discussed. Genetic data are insufficient here for conclusions, but the existence of animals with a different type of duplication on each foot makes doubtful any of the suggested explanations.

NUMBER 00887

Bond, V.P.
Sugahara, T.
Meetings: Radiosensitivity in Animals.
Science 164(3886):1428-1435,1960.

Differences in radiosensitivity exist in animals, and possible reasons for such differences include dissimilarities in: cell kinetics in organ systems in the different species, the proportions of cells that are in different stages of the cell cycle; the size of stem-cell pools; the kinetics of cell proliferation; the susceptibility to various degrees of depletion of mature cell populations; physiological systems; and genetic constitution. In order to explore reasons for differing radio-sensitivity, particularly among mammalian strains and species, a symposium was held in Kyoto, Japan, 20-23 May, 1968. The meeting was sponsored by the National Science Foundation and the Japanese Ministry of Education, under a US - Japan cooperation program. The conference dealt with basic questions relating to genetics, physiology, the kinetics of cell proliferation and factors that control cell proliferation in the normal and the stressed animal. The problems involved in differential species radiosensitivity were brought into sharper focus, but a great deal of work needs to be done before the differences can be understood. Detailed work is required on differences in pool sizes, the kinetics of cell proliferation, and control mechanisms of cell proliferation in the different species. Physiological variables must be better defined, particularly the rate of utilization of mature functional cells in the irradiated versus normal individual. The possible role of the reticuloendothelial system deserves a great deal more attention, as do changes in blood vessels and the supporting matrix for proliferating tissues, particularly at dose levels high in the lethal range for the bone marrow syndrome and above.

NUMBER 00888

Frewin, J.
(The Heamapophyses in the Caudal Vertebrae of the Cat, Dog, and Ox.).
Zbl.Vet.Med.,A, 17:565-572,1970.

The structure and behaviour of the haemopophyses in the cat and dog are very similar. In the cat the 4th to 6th or 8th, or 3rd to 7th caudal vertebrae have haemapophyses which fuse in the midline with one another to form a haemal arch. In the dog there are haemal arches on the 4th to 5th or 6th vertebrae, on the 5th and 6th or on the 4th to 7th. The heamal arches in the cat are always syndesmotic, while in the dog they are either syndesmotic or synostotic in their union with the haemal processes. If the haemapophysis do not unite synostotically with one another they remain in carnivora as independent ossa arcus haemalis and are always syndesmotically united with the haemal processes. In cattle the haemapophyses develop at first as in the carnivora but before closure of the epiphyseal plates of the vertebrae they always fuse synostotically with the haemal process of the 2nd to 5th caudal vertebrae. In this way these processes appear very high. Their ventral ends may fuse with one another in a few vertebrae in the

NUMBER 00889
Zacharski, L.R.
Elverback, L.R.
Linman, J.W.
Leukocyte Counts in Healthy Adults.
Amer.J.Clin.Path. 56:148-150,1971.

In an attempt to resolve the uncertainty concerning normal values for leukocyte counts and their possible variation with age and sex, total and differential leukocyte caunts in 507 healthy adults were analyzed. Values approximated those previously reported, with the exception of lymphocytes, for which our 97.5 percentil was lower. No significant variation was noted with age and sex.

NUMBER 00890
Highsmith, R.F.
Kline, D.L.
Kidney: Primary Source of Plasminogen After Acute Depletion in the Cat.
Science 174(4005):141-142 1971.

The kidney was the primary source of plasminogen to restore normal plasma levels, after acute plasminogen depletion was produced by injection of streptokinase in cats. The concentration of plasminogen in the hepatic vein remained below that in the artery during the time when concentrations in the artery and renal vein were returning to normal.

NUMBER 00891
Kalil, R.E.
Jhaveri, S.R.
Richards, W.
Anomalous Retinal Pathways in the Siamese Cat: An Inadequate Substrate for Normal Binocular Vision.
Science 174:302-305,1971.

All major retinal pathways in the Siamese cat are abnormal, with almost total crossing of the projections to the pretectum and superior colliculus. These projections represent a marked disruption in the customary neural subtrate for binocular vision, which implies a consequent impairment in steroscopic depth perception. Crossed eyes, commonly seen in the Siamese cat, may therefore arise from a neuroanatomical defect in the primary visual pathways.

NUMBER 00892
Moss. M.
Norback, C.R.
Robertson, G.G.
Critical Developmental Horizons in Human Fetal Long Bones.
Amer.J.Anat. 97:155-175,1955.

Growth of the human fetal long bone was analyzed by differential growth technics. The ratios between the specific growth rates of any combination of long-bone osseous shafts remained constant throughout the period covered by the material (upto 175 mm crown-rump length). The constituent bones of both the forearm and leg grew identical specific growth rates within their respective gross body segments. The bones of each distal segment grew relatively faster than those of their respective proximal segments. Each segment of the lower extremity grew relatively faster than its corresponding segment in the upper extremity. An interphase, or change in linear slope, was observed, when these same bony shaft lengths were plotted aginst crown-rump length or against time. These interphases occured when the fetuses reached the 80-89 mm crown-rump length range, in the vicinity of the 12th week. The specific growth rates of all the bones decreased at these critical developmental horizons. As the intercrosseous ratios remained constant both before and after these interphases, some common factor must have intervened, simultaneously, in the development of all the bones. Several histomorphological changes were found to correlate with interphase: (1) the percentage of gross body segment length which the bone occupies, as well as, (2) the percentage of total skeletal blastemal length which the osseous shaft occupies, increased radidly until the interphase and thereafter was relatively constant. (3) profound alteration in the mode of bone growth occurred, namely (a) the epipyseal cartilaginous growth center first appeared, (b) endochondral bone formation began, (c) the orientation of the cartilage cell nests altered from transverse to longitudinal, and (d) the bone tissue itself changed.

NUMBER 00893
Smith, R.N.
Fusion of Ossification Centres in the Cat.
J.Small Anim.Pract. 10:523-530,1969.
Thirty-seven kittens from eleven litters have been radiographed and eight others have been completely dissected to provide a record of the times of fusion of the epiphyses of the limb bones. The observations are recorded with references to individual bones and then to the limbs at approximately monthly intervals, attention is drawn to the variable presence of the sesamoid bone in the medial head of the gastrocnemius muscle. A comment is made in the discussion on the sequence of fusion of the ossification centres.

NUMBER 00894
Aruo, S.K.
Feline Rabies.
Vet.Rec. 88(3):79,1971.
A rebuttal letter concerning the use and efficacy of HEP

rabies vaccine in Uganda cats and dogs.

NUMBER 00895

Cranford, J.
Ravizza, R.
Diamond, I.T.
Unilateral Ablation of the Auditory Cortex in the Cat Impairs Complex Sound Localization.
Science 172(3980):286-288,1971.

Unilateral ablation of the auditory cortex in the cat results in a profound deficit in attending to stimuli on the side contralateral to the lesion. The deficit is also manifested in an abnormal perception of left-right pulse pairs when the pulse which leads by a few milliseconds is contralateral to the damaged hemishere.

NUMBER 00896

Ryan, C.P.
Smith, R.A.
Bilateral Nephrolithiasis in a Cat.
J.A.V.M.A.158(11):1646-1647,1971.

NUMBER 00897

Clifford, D.H.
Soma, L.R.
Feline Anesthesia, Chap. 19,
Federation Proceedings 28(4):1479-1499,1969.

An excellent review of anesthesia of the cat. Contains techniques, doses and uses of the complete range of available materials: pre-anesthetics, intravenous and inhalation anesthetics, local and epidural agents, topical and euthanasia agents, post-anesthetic care and mortality statistics. The authors include an excellent knowledge of cat care. Also contains 164 references.

NUMBER 00898

Aitken, I.D.
Syme, A.
Chalmers, J.W.
The Fate of Some Foreign Proteins in the Cat.
Res.Vet.Sci. 10:523-529,1969.

Sera taken from five cats, before, during, and after slow intravenous infusion of 60-100 ml. of horse serum, were examined by electrophoresis, immunoelectrophoresis, autoradiography and selective precipitin tests for evidence of conversion of horse albumin to cat A-globulin. The results obtained provided no indication of protein conversion, but showed that infusion produced a mixed serum analogous to that resulting from in vitro mixtures of cat and horse sera. Intravenously injected 125I-labelled egg albumin (10-15 mg./kg.) was cleared from the circulation of 3 cats within 24 hours. Most of the radioactivity was recovered in urine, and egg albumin could be demonstrated immunologically in that fluid. Similar rapid clearance of egg albumin occurred in 6 rabbits and on one clinically nephritic dog. In 2 healthy dogs elimination was less rapid, a period of 4-5 days required to reduce serum activity to the 1% level.

NUMBER 00899
Fox, R.
Blake, R.
Stereoscopic Vision in the Cat.
Nature 233:55-56,1971.
We have been able to detect stereoscopic vision in the cat, a result which complements neurophysiological data demonstrating the presence of cells in cat visual cortex with receptive field geometry which is specialized for the detection of retinal disparity.

NUMBER 00900
Fox, M.W.
Inherited Structural & Functional Abnormalities in the Dog.
Can.Vet.J. 11(1):5-11,1970.
A number of structuro-functional defects, including behavior disorders, of possible hereditary origin in the dog are reviewed. The significance of the genotype-environment interaction in relation to diagnosis, prognosis and treatment of such abnormalities is detailed. Genetic changes as a result of artificial selection and hereditary influences on socialization and trainability are discussed. Inherited structural and functional abnormalities in the dog are systematically listed.

NUMBER 00901
Rubin, G.J.
Cardiovascular Disease of the Feline.
Friskies Res.Digest 7(3):1-3,12-13,Fall,1973.

NUMBER 00902
Wilsin, J.
Graham, T.C.
Acquired Hypereaction to Barbiturate Anesthesia in Cats.
Friskies Res.Digest 7(3):10-11,14,Fall, 1970.
Cats exhibit a unique response to barbiturate anesthesia & present a specific problem to the practicing veterinarian. Repeated doses of sodium pentobarbital can produce undesirable reactions and even cause complete suppresion of central nervous system function, resulting in death. If a cat has been subjected previously to barbiturates, desired levels of anesthesia may be achieved with decreasing doses. This report deals with the effect

(reverse tachyphylaxis) and its consequences as observed in three cats.

NUMBER 00903
Priester, W.A.
Pet Cats and Pollution.
Science 173(4003):1191,1971.
Although the unfortunate contact of Leo Pard and his zoo colleagues with city pollutants (see Science, News and Comment, 9 July, p.130.) provides an exotic basis for the suggestion that "the zoo animals could potentially serve as barometers of the medical effects of the variety of pollutants in the city's air", one needn't consider only captive wild animals for this purpose. Since members of the cat family groom themselves with their tongues, it should come as no surprise that the first cases of lead poisoning observed at the Staten Island Zoo were in cats. The city contains, however, a far larger and more appropriate "barometer" in its domestic cat population; surely pet cats would concentrate pollutants as well as big zoo cats, and would have the added advantage of sharing an environment more nearly like that of their owners.

NUMBER 00904
Spradbrow, P.B.
Marley, J.
Portas, B.
Burgess, G.
The Isolation of Mycoplasma From Cats With Respiratory Disease.
Austral.Vet.J. 46:109-110,1970.
Mycoplasma were isolated from 11 of 160 samples from cats with respiratory disease. Most isolations were made from nasal swabs. Two of the isolates were tested for metabolic activity, and 1 fermented glucose, while the other metabolized arginine. Metabolism-inhibiting antibodies active against the arginine metabolizing mycoplasmas were present in 6 of 20 cats serums at titres of 1/2 to 1/8. Antibodies against the glucose fermenting Mycoplasma was not present in any of the serums.

NUMBER 00905
Griffiths, I.R.
Abnormalities in the Central Nervous System of a Kitten.
Vet.Rec. 89(4):123-124,1971.
A letter describing clinical and pathologic diagnosis of a meningocoele in a 4-week old kitten.

NUMBER 00906
Stewart, D.H.
Dangers of All-liver Diet for a Cat.
Vet.Rec.89(4):125,1971.

After a year in the U.K., I was interested to see, for the first time, what used to be a relatively common sight in Australia. A 14-year old white female cat was admitted for grooming, the coat being exceptionally knotted for a short-haired cat. I was expecting a difficult anesthesia patient as the animal crouched motionless in the typical "angry-cat" position; but in lifting the animal I realized that the cervical vertebrae were completely ankylosed and that spondylosis continued for most of the vertebral column. On questioning the owner, suspicions were confirmed. The cat had been fed almost solely on liver; surely another case of hypervitaminosis A?

NUMBER 00907

Jain, N.C.
Alkaline Phosphatase Activity in Leukocytes of Some Animal Species.
Acta Haemat. 39:51-59,1968.

Alkaline phosphatase activity (alpa) was observed frequently in the neutrophils of the horse, cow, sheep, goat, pig, rabbit, and monkey, whereas the neutrophils of the dog and cat were devoid of ALPA. Alkaline phosphatase activity was also detected, to a variable extent, in the eosinophils of the horse, cow, dog, and cat, and in the basophila of the cow. No APLA was seen in the monocytes, lymphocytes, erythrocytes, and thrombocytes of all the species examined.

NUMBER 00908

Jain, N.C.
Alkaline Phosphatase Activity in the Canine and Feline Granulocytes.
Vet.Rec. Sept. 9,1967.

Mature neutrophils of all examined dogs and cats were devoid of alkaline phosphatase activity (ALPA). No ALPA was observed in band neutrophils, neutrophilic myelocytes or myelocytes seen in 79 canine and 13 feline blood samples. A cat diagnosed as a case of malignant lymphosarcoma showed distinct ALPA in most of the basophils. A few eosinophils in this cat, and also in another cat showing signs of diabetes mellitus, has slight ALPA.

NUMBER 00910

Jain, N.C.
A Staining Technique to Demonstrate Erythrocyte Refractile Bodies in Cat Blood.
Br.Vet.J. 125:437-441,1969.

Erythrocyte refractile (ER) bodies in feline blood can be easily recognized in thin dry unfixed smears stained by the myeloperoxidase staining procedure of Sato and Sekiya. A staining technique to demonstrate ER bodies was developed combining a brief exposure to 0.5% copper sulphate solution and the Wright-Leishman staining procedure. The technique clearly reveals ER bodies and produces a permanent preparation. The smear is also suitable for a differential leucocyte count and examination of morphologic features of leucocytes.

NUMBER 00911
Festing, M.F.W.
Bleby, J.
Breeding Performance and Growth of SPF Cats (Felis catus).
J.Small Anim.Pract. 11:533-542,1970.
Data on the breeding performance and growth rate of the kittens in a specific pathogen free cat colony are given. Mean litter size was 2.8 kittens in the 1st litter, & 0.3 & 4.0 in the 2nd & 3rd litters, respectively. Kitten losses were 3.3% stillbirths, and 5.6% losses prior to weaning at 8 weeks of age. Mean birth weight of first litter kittens was 109 grams, with no detectable difference between males and females. Mean 42-day weight was 625 g for males, and 534 g for females. No relationship was found between litter size and either birth weight or 42-day weight. It was concluded that there are substantial benefits in breeding cats under SPF conditions, largely because of the low pre-weaning mortality.

NUMBER 00912
605
Bleby, J.
Lacey, A.
The Establishment of a Specific Pathogen Free Cat (Felis catus) Colony.
J.Small Anim.Pract. 10:237-248,1969.
The establishment of the first specific pathogen free cat (Felis catus L.) colony in the U.K. is described. The application of anaesthesia and the techniques employed in hysterectomy are described, as also is a method of handrearing kittens under conventional and SPF conditions. The formulae of diets used in rearing kittens from birth to maturity, and some details of body weight, are given. Cats free from endemic pathogens were produced with considerable improved breeding performance. It is likely that these results will have a marked effect on future methods of cat breeding.

NUMBER 00913
Vagek, Z.
(Development of a Cat's Placenta.).
Csl.Morfol 3:49-65,1955.
The material of the present research work is represented by 21 stages of development in the cat's placenta, ranging from the embryonic cavity with the diameter of 6mm to the placenta of the embryo when 13.5 cm long. 1.at the beginning of the implantation, the trophoblast

forms plasmodial villi which grow into the lumen of the dilated glandular ducts, and only in a small measure, also into the septa of the tissue between the ducts. The epithelium is destroyed and resorbed up to the basal membrane, which remains during a transitional stage. The nuclei of the plasmodium undergo mitotic division. The cells of the connective tissue in the septa change into deciduous cells. 2.Following on the formation of the chorionic villi, the trophoblast differentiates into two layers: the internal one, consisting of the light cells of the cytotrophoblast and the external one, formed by the plasmodium with dark nuclei rich in chromation. The cells of the cytotrophoblast divide by mitosis, the nuclei of the plasmodium divide by different forms of amitotic division. The cells of the cytotrophoblast disappear towards the end of the gravidity. 3.Among the chorionic villi, there are lamellae consisting of deciduous cells and maternal blood vessels. The deciduous cells are bordered with a layer of connective substance compressed between the cells of the connective tissue, staining on the collagen and containing networks of reticular fibrils. The deciduous cells gradually disappear but they remain until the end of the gravidity, deposited into the folds between the loops of maternal capillaries. 4. The plasmodium shows signs of secretion demonstrated by elimination of eosinophilous globules between the maternal elements. The secretion is most intense when the embryo is 2 cm long, and is kept until the end of gravidity. 5. The leukocytes, especially the lymphocytes, issue from the maternal blood vessels, pass through the plasmodium and through the cytorophoblast into the mesodermal stroma of the villi, where they change into round elements with vacuolized cytoplasm. 6.Apart from the phagocytosis, the breaking up of the erythrocytes and the resorption of the detritum remaining after the disintegration of the maternal mucous membrane, a special kind of histiotrophy takes place, namely, transformation of parts of the mucous membrane into the plasmodium which the separates itself from the mucous membrane, penetrates, by means of projections, between the cells of the cytotrophoblast, and, at the same time, is resorbed by these cells; this restoration is rapid, without any preceding degenerative changes (pycnosis of the nuclei, caryorhexis, formation of the detrium, etc.). 7.The cat's placenta is not a clear endotheliochorial placenta; the deciduous cells of maternal origin remain a constant part of the placental labyrinth until the end of the gravidity.

NUMBER 00914
Dorn, C.R.
Schneider, R.
Public Health Aspects of Cancer in Pet Dogs and

Cats.
Presented at 99th APHA Meeting, Minneapolis, Minn., Oct.71.
The results of epidemiologic studies utilizing human, canine and feline index cases generally do not support the hypothesis of interspecies transmission of malignant neoplasms. Only one retrospective study has provided evidence that childhood leukemia may be associated with sick or dead cats in the same household. The development of virological and serological tests provides new approaches to more definitve study of this question.

NUMBER 00915
Mcgowan, M.J.
Martin, D.P.
Loeb, W.F.
Age Related Changes of Hematologic Values in Macacca Mulatta.
Presented at 22nd Meet., Am.Assoc.Lab.Anim.Sci., 10-1971,NY.
Between 114 and 170 M.mulatta (38 at 2 years of age) were examined for PCV, WBC and differential values in blood, from birth through 2 years of age. Mean, S.D. and range is given.

NUMBER 00916
Berchelmann, M.L.
Kalter, S.S.
The Cellular Composition of the Bone Marrow of Normal Baboons (Papio cynocephalus).
Presented at 22nd Meeting Am.Assoc.Lab.Anim.Sci., Oct.1971, NY.
Normal baboons had marrow samples taken from birth through 5 months of age, or at adulthood (25). Results were given. Adult M:E ratio is 1.79:1.

NUMBER 00917
Rickard, C.G.
A Transmissible Virus-induced Lymphocytic Leukemia of the Cat.
J.Nat.Cancer Inst. 42:987,1969.

NUMBER 00918
Zwaan, J.
Williams, R.M.
Cataracts and Abnormal Proliferation of the Lens Epithelium in Mice Carrying the Cat FR Gene.
Exp.Eye Res. 8:161,1969.

NUMBER 00919
Silson, M.
Robinson, R.

Hereditary Hydrocephalus in the Domestic Cat.
Carnivore Genet.Newsletter 6:129,1969.

NUMBER 00920
Lombard, C.
Les Cancers et Tumeurs du Chat.
Recl.Med.Vet. 45:671-674,1952.

NUMBER 00921
Murray, J.
The Zoological Distribution of Cancer.
Imperial Cancer Research Fund, Third Scientific
Report, London, 1908.

NUMBER 00922
Reiman, H.
Mammatumoien bei Hund und Katze.
Inaug.Dissert. Leipzig, 1939.

NUMBER 00923
Katsurado, ?.
Okino, ?.
Cancer in Cats.
Jap.J.Canc.Res. 132:343,1938.

NUMBER 00924
Eggleton, M.G.
The State of Body Water in the Cat.
J.Physiol. 115:482-487,1951.

NUMBER 00925
Mackay, H.
Effect on Kittens on a Diet Deficient in Animal Fat.
Biochem.J. 15:19,1921.

NUMBER 00926
Enzie, F.D.
Price, E.W.
Internal Parasites of Dogs and Cats.
Agricultural Year Book, U.S.D.A.

NUMBER 00927
Gershoff, S.N.
The Nutritional Requirements of Cats.
J.A.V.M.A. 134:139-141,1959.

NUMBER 00928
Juleb, L.V.

Saunders, L.Z.
Coates, H.V.
Thiamine Deficiency Encephalopathy in Cats.
J.Comp.Path.Ther. 66:217-226,1956.

NUMBER 00929
Foster, M.A.
Hisaw, F.L.
Experimental Ovulation and the Resulting
Pseudo-pregnancy in Anestrus Cats.
Anat.Rec. 62:75,1935.

NUMBER 00930
Green, J.D.
Clemente, D.D.
De Groot, J.
Experimentally Induced Epilepsy in the Cat With
Injury of Cornu Ammonis.
A.M.A.Arch.Neural. Psychiat. 78:259-263,1957.

NUMBER 00931
Green, J.D.
Clemente, D.D.
De Groot, J.
Rhinencephalic Lesions and Behavior in Cats: an
Analysis of The Fluver-Bucy Syndrome With Particular
Reference to Normal and Abnormal Behavior.
J.Comp.Neurol., 1957.

NUMBER 00932
Grenlich, W.W.
Artificially Induced Ovulation in the Cat (Felis
domestica).
Anat.Rec. 58:2-7,1934.

NUMBER 00933
Coop, M.C.
A Treatment for Osteogenesis Imperfecta in Kittens.
J.A.V.M.A. 132:299-300,1958.

NUMBER 00934
Decamp, C.E.
Cat Practice.
Vet.Med. 55:55-56,1960.

NUMBER 00935
Henderson, G.L.
Keywood, E.K.
An Osteodystrophy in Siamese Kittens.
Vet.Rec. 71:317,1959.

NUMBER 00936
Riser, W.H.
Schnelle, G.B.
Osteogenesis Imperfecta in a Female Cat.
J.A.V.M.A. 128:609-610,1956.

NUMBER 00937
Roberts, A.H.
Scott, P.P.
Balance Studies on Cats on a High Protein Diet, Raw Heart.
J.Physiol. 148:749,1959.

NUMBER 00938
Roberts, A.H.
Scott, P.P.
Nutrition of the Cat. 5. The Influence of Calcium and Iodine Supplements to a Meat Diet on the Retention of Nitrogen, Calcium and Phosphorus.
Brit.J.Nutr. 15:73-82,1961.

NUMBER 00939
Robinson, R.
Inheritance of the Black Form of the Leopard Panthera Pardus.
Genetica 41:190-197,1970.
Using data on more than 584 offspring born in zoos, the black form is shown to be inherited as an autosomal monogenic recessive to the spotted wild type. Pairings of black animals inter se result in significantly smaller litters than other possible pairings. Reasons offered are that black animals may be slightly more inbred than the spotted, or that black animals may be more prone to prenatal loss. The significance of the latter possibility is briefly discussed in relation to the persistence of the spotted/black polymorphism for areas of south-east asia.

NUMBER 00940
Prescott, R.G.W.
Mounting Behaviour in the Female Cat.
Nature, London 228:1106-1107,1970.
Observations were made on 11 multiparous female cats aged more than 16 months and living as members of a larger group of adult females and adolescents of both sexes. Sexually experienced male cats were present in an adjacent enclosure separated from the females by a wire fence, so that the social interaction between male and females was possible, but mounting could not take place. It was confirmed that mounting by females tends to occur at oestrus and is directed preferentially at other oestrus females. All but 2 of the females performed elements of the male mounting

sequence, and, with the exception of the "chirp" call given by males before mounting, all the components that lead to intromission were seen, although 4 of the females never progressed beyond the neck grip and partial mount. Pelvic thrusting was seen in only 3 females and had a lower frequency than is usual in males. A mounting male was an adequate stimulus to produce the full pattern of crouching, treading and tail-deflexion in the oestrus cat being mounted, but no after-reactions were observed, presumably because they are specific to the vaginal stimulation resulting from intromission.

NUMBER 00941
Burke, R.E.
Levine, D.N.
Zajac, F.E.
Mammalian Motor Units: Physiological-histochemical Correlation in Three Types in Cat Gastrocnemius.
Science 174(4010),1971.

The correlation among a variety of physiological properties and the histochemical characteristics of muscle fibers belonging to single motor units in a mixed mammalian muscle is directly demonstrated. The population of motor units making up the cat gastrocnemius was classified into three nonoverlapping groups on the basis of a combination of physiological parameters. The muscle fibers belonging to motor units of each physiological type exhibited a distinctive histochemical profile, such that the three basic histochemical "fiber types" exactly matched the three physiologically defined groups. Within each individual motor unit, the muscle fibers were histochemically uniform.

NUMBER 00942
Butler, H.C.
Aortic Embolism and Posterior Paralysis in the Cat.
J.Small.Anim.Prac. 12:141,1971.

The clinical signs of naturally ocurring aortic occlusion or aortic embolism in the cat include paraplegia, loss of femoral pulse, coldness of rear extremities, pain, and swelling of the gastrocnemius muscle with eventually atrophy. The syndrome apparently results most often from fragmentation of an endocardiac thrombus. A fragment of the thrombus lodges in the aorta at the iliac bifurcation, there by disrupting the blood supply to the rear limbs. However, research studies have shown that neither single nor double ligation of the aorta would cause paralysis, which suggests that paralysis is not due to a simple mechanical or space occupying obstruction of the blood flow to the posterior limbs. Moreover, evidence has been gathered to show that paralysis may be related to materials in or eluted from a clot, thrombus, or embolus. When 5-hydroxy tryptamine, which is produced by the platelets of the thrombus, was injected into a space in the aorta, artificially formed by

2 occluding ligatures, a paralytic condition was produced accompanied by loss of collateral circulation by way of the spinal arteries and producing signs similar to those found with aortic embolism occuring naturally in the cat.

NUMBER 00943

Bush, D.L.
Use of Dental film in small Animal Practice.
J.A.V.M.A. 159(7):877-879,1971.

The use of dental film may facilitate diagnostic radiography in a way that would be difficult or impossible with standard case and films. Technics for its use is described.

NUMBER 00944

Gardner, M.B.
Rongey, R.W.
Johnson, E.Y.
Dejournett, R.
Huebner, R.J.
C-type Tumor Virus Particles in Salivary Tissue of Domestic Cats.
J.Nat.Cancer Inst. 47(3):561-568,1971.

C-type RNA tumor virus particles were observed by electron microscopy in the submaxillary gland, paratid gland, and bone marrow tissues from almost every domestic cat with spontaneous lymphoma and fibrosarcoma induced by feline sarcoma virus. C-type particles were less frequent in these tissues from cats with severe anemia, spontaneous sarcoma, or infectious peritonitis and were not seen in normal cats. Whether this finding is significant in the propagation and natural spread of this virus is unknown.

NUMBER 00945

Mcallister, R.M.
Nelson-rees, W.A.
Johnson, E.Y.
Rongey, R.W.
Gardner, M.B.
Disseminated Rhabdomyosarcomas Formed in Kittens by Cultured Human Rhabdomyosarcomas Cells.
J.Nat.Cancer Inst. 47:603-611,1971.

Cultured human rhabdomyosarcoma cells (RD cell, line 2) were inoculated into the fetuses of 3 pregnant cats at about 40 days' gestation. Three of 5 surviving kittens from 2 litters developed disseminated rhabdomyosarcomas 46, 55 & 60 days after birth, respectively. One full-grown stillborn kitten of the 3rd cat had rhabdomyosarcomas in the liver and thymus. The tumors in all kittens looked like the original rhabdomyosarcoma from which the RD cell line was derived. Cell lines derived by tumor cell isolation from 3 cat tumors consisted of 2 cytologic types resembling those of the original tumor, polygonal cells and strap cells. Metaphases of these cells contained many aberrations, but the chromosome pattern was like that of the original human rhabdomyosarcoma cells. Those lines tested had a rapid generation time, a high saturation density, formed colonies in agar and contained myoglobin. One cell line was inoculated into fetal cats, and rhabdomyosarcomas composed of human cells formed in 2 of 3 surviving kittens at 43 & 47 days after birth, respectively. Although the parent RD cell line contained no detectable C-type virus particles, 2 cat tumors and 1 cell line derived from 1 of these tumors contained C-type virus particles of unknown origin.

NUMBER 00946

Wilding, G.P.
Dangers of All-Liver Diet for a Cat.
Vet.Rec. page 150-151, July 31,1971.
Over the past two and one-half years the author has seen 13 cases of hypervitaminosis A. Severity ranged from complete vertebral ankylosis to a slight, chronic, non-responsive lameness. Ages ranged from 18 months to 10 and 1/2 years; the majority were under 5 years of age.

NUMBER 00947

Ordidge, R.M.
Conditions Seen in Feline Practice.
Vet.Rec. 88:617,1971.
May I comment on the article by Miss Joan Joshua entitled "Some conditions seen in feline practice attributable to hormonal causes."? (Vet.Rec. 88:511, 1971). I agree entirely with Miss Joshua when she says that estrogens are contraindicated in the cat, but not for the reasons stated. In my experience estrogens are extremely toxic in the cat, causing hepatitis, pancreatitis, myocarditis and frequent death. Fortunately, male hormones can be used in place of estrogens with good results. I would also like to mention the use of progesterones in treating the "miliary eczema complex" in cats. The only side effect noted is a tendency to put on weight. This can be minimized by using the oral form of progesterone and reducing the dosage to the lowest level necessary to keep the skin lesions under control

NUMBER 00948

709
Bedford, P.G.C.
Clarke, E.G.C.
Suspected Benzoic Acid Poisoning in the Cat.
Vet.Rec. 88:599-601,1971.
Suspected benzoic acid poisoning in a cattery is reported and the effects of over-dosage with this compound is described. A clinical occurrence has not been previously reported in the U.K. The affected animals exhibited extreme aggression, and convulsions were followed by death

in most cases. Forty % of the cattery inmates died or had to be destroyed on humane grounds.

NUMBER 00949

Harthoorn, A.M.
Harthoorn, S.
Two Field Operations on the African Lion (Felis Leo).
Vet.Rec. 89:159-164,1971.

Restraint and anesthesia on two free-living lions were carried out 9 times. The difference in the approach to restraint of free-living as compared to caged wild animals is discussed. A table summarizes the principal substances used, namely, phenylcyclohexyl piperidine monohydrochloride and 7-chloro-1,3-dihydro-1-methyl-5 phenyl-2h-1, 4-benzodiazepin-2-one for restraint, and Thiopentone sodium and chlorpromazine HCl for anesthesia. Field surgery in remote places demands antisepsis rather than asepsis, and there is usually little opportunity for after-care. The use of saline drip during anesthesia enables untutored personnel to assist with intravenous anesthesia.

NUMBER 00950

Teske, R.H.
Dirofilariasis in a Cat.
J.A.V.M.A., P.891, October 1,1971.

In March, 1971, a cat from N.Carolina was found infected with D.immitis. The cat, a mature male, was part of a shipment of cats procured from rural areas of N.Carolina by a dealer in laboratory animals. Prior to shipment as conditioned subjects, the cats reportedly had been vaccinated against feline panleukopenia and were dewormed with piperazine, disophenol and Drocarbil. Upon receipt, the cat had rhinitis and conjunctivitis. During the next 4 days, during which time there were anorexia and diarrhea, the cat became dehydrated and emaciated. He was euthanized on the 5th day in a moribund condition. History, necropsy and histopathology indicated a primary diagnosis of feline panleukopenia; however, 2 adult worms identified as D.immitis were found in the right ventricle of the heart, extending into the pulmonary artery. Gross lesions associated with D.immitis were not observed. Subsequently, microfilariae were demonstrated in peripheral blood.

NUMBER 00951

Osbaldiston, G.W.
Stowe, E.C.
Microflora of Alimentary Tract of Cats.
Am.J.Vet.Res. 32(9):1399-1405,1971.

The gastrointestinal microflora was identified and quantitated in suckling kittens and in adult cats fed either a conventional feline ration or a chemically defined, elemental ration. Streptococci, enterococci, coliforms, and lactobacilli were the predominant varieties in the microflora. The different rations were not associated with significant changes in the microfloral populations or patterns of distribution within the gastrointestinal tract.

NUMBER 00952

Schalm, D.W.
Clinical Significance of Plasma Protein Concentration.
J.A.V.M.A. 157(11):1672-1675,1970.

The normal range for plasma protein concentration (PPC) is from 6.0-7.5 gm /100 ml for dogs and cats. The newborn commonly has less than 5.0 gm /100 ml for the first few weeks of life, & aged dogs and cats may have 8.0 gm /100 ml due to an increase in the globulin fraction with advancing age. Thus, age is a factor to be taken into consideration when interpreting results. Albumin and fibrinogen are produced by the liver, whereas the globulins are produced by lymphocytic tissues. Loss of liver function, hemorrhage, chronic gastro-intestinal disease, inadequate nutrition, chronic glomerulonephritis, and lymphosarcoma commonly result in low PPC. Response to antigens, as in chronic infectious diseases, increases gamma globulin, which is reflected in increased PPC. Contraction of the spleen in excitable dogs increases the mass of erythrocytes (PCV) in the circulation. An increased PCV but normal PPC is indicative of splenic contraction, whereas a normal or increased PCV associated with a significantly increased PPC is an indication of dehydration. Progress in hydrating an animal patient can be readily visualized by following the changes produced in PCV and PPC. (No data related to age changes in PPC for the cat is given in the text.)

NUMBER 00953

Schalm, O.W.
Myeloproliferative Disease in the Cat, Associated With C-Type Leukoviurus Particles in the Bone Marrow.
J.A.V.M.A. 157(11):1686-1696,1970.

A pluripotential stem cell of the bone marrow gives rise to several different cell lines. Myeloproliferative disease results when one or more cell lines undergo abnormal proliferation leading to failure to produce functional definitive cells. Myeloproliferative diseases in the cat are characterized by rapid wasting and profound irreversiable anemia. Hepatomegaly, splenomegaly, and lymphadenopathy are also frequent findings. Terminally, myelofibrosis may develope and be associated with extramedullary hematopoiesis or myeloid metaplasia in the liver, spleen and lymph nodes. Myeloproliferative diseases can usually be differentiated from the commonly occurring lymphocytic leukemia. C-type virus has been found by electron microscopy with considerable regularity in bone marrow cells of cats with myeloproliferative diseases. This finding strongly implicates the C-type leukovirus as the causal agent. The possible virus cause similar to feline leukemia virus, abnormal proliferation of hematopoietic cells, infiltrations in visceral organs, and terminal nature, suggest placing the myeloproliferative disease of cats within the leukemia-sarcoma complex. The frequent occurrence of myeloproliferative disease requires the addition of bone marrow examination to routine diagnostic procedures when confronted with marked, unresponsive anemia in the cat. Defective maturation of bone marrow cells and resulting cellular patterns, as seen in aspirated bone marrow, are of diagnostic value. The leukemia-sarcoma-myeloproliferative disease complex is responsible for a large portion of the frequently occurring irreversible anemias of cats.

NUMBER 00954
Tasker, J.B.
Laboratory Evaluation of Fluid Balance Disorders in Dogs and Cats.
J.A.V.M.A. 157(11):1703-1706,1970.
A general review of diagnostic methods in fluid balance evaluation. Normal values are included for the dogs, and in the absence of adequate data regarding such values for the cat, cats are considered the same as dogs.

NUMBER 00955
Gillette, E.L.
Veterinary Radiotherapy.
J.A.V.M.A. 157(11):1707-1712,1970.
Spontaneous animal tumors of several cell types were irradiated. A 2-year cure-rate was established for tumors in each of 4 cell types by determining the percentage non-recurrence at 2 years following radiotherapy. The 2-year cure-rates were as follows: Perianal tumors, 69% fibrosarcomas, 56%; squamous cell carcinomas, 74%; and mast cell tumors, 54%. Radiotherapy was considered to be an effective means for treating cancer in order to alleviate suffering and prolong the useful lifespan of domestic animals.

NUMBER 00956
Short, C.E.
Advances in Small Animal Anesthesiology.
J.A.V.M.A. 157(11):1719-1721,1970.
An attempt has been made to show the use of basic scientific information applied to the clinically affected small animal and how it can affect anesthetic management for required surgical procedures. It is no longer acceptable to determine a dosage per pound management of small animal anesthesia, but one must have an understanding of anesthetic principles to allow proper management of each dog or cat according to its physiologic responses to the

combination of pathologic conditions existing, anesthetic management, and surgical manipulation necessary for correction of the defect.

NUMBER 00957

Theilen, G.H.
The Present Status of the Leukemia-Sarcoma Complex in Man and Lower Animals.
J.A.V.M.A. 157(11):1742-1752,1973.

The leukemia-sarcoma complex of chickens, mice and cats is caused by riboneucleic acid (RNA) C-type leukovirus, which is also suspected as the causal factor of leukemias and sarcomas in other animal species and man. Deoxyribonucleic acid (DNA) herpes-type viruses now are established as the causal factor of Marek's disease of chickens and are suspected as the etiologic agent of Burkitt's lymphoma of children, other neoplasms of man, and infectios mononucleosis. A method for prevention and control was recently established for Marek's disease, which might serve as a model for the control of suspected herpesvirus tumor infections in man. The leukemia-sarcoma complex of cats should serve as a good model for the study of the leukemia-sarcoma complex in other animals and it should be of particular value in studies designed to develope methods for detection, control and prevention of similar neoplasms in man. (Includes 109 references).

NUMBER 00958

Schneider, R.
The Natural History of Malignant Lymphoma and Sarcoma in Cats and Their Associations With Cancer in Man and Dog.
J.A.V.M.A. 157(11):1753-1758,1970.

Laboratory evidence through transmission studies, nonfeline tissue culture replication, and other means have indicated that perhaps the feline oncogenic viruses could cause cancer in other than feline hosts. This is a preliminary report on a study carried out to determine if, in households with cancerous cats, there was an increase of tumors in human beings, dogs and other cats. The retrospective case-control method was used in a similar manner in a previous human-canine household cancer study. Case households were households containing cats with histologically confirmed cancer, submitted to the Alameda-Contracosta Counties Animal Neoplasm Registry during the 5-year period, July 1,1963 to June 30,1968.

NUMBER 00959

Dubey, J.P.
Miller, N.L.
Frenkel, J.K.
Toxoplasma Gondi Life Cycle in Cats.
J.A.V.M.A. 157(11):1767-1770,1970.

Cats fed Toxoplasma-infected mice excreted coccidian oocysts resembling those of Isospora bigemina. A detailed comparison of the physical, chemical, and antigenic characteristics of these oocysts with Toxoplasma infectivity of the feces indicated that these oocysts were a stage of Toxoplasma development.

NUMBER 00960
Agress, H.
Comparative Study of Spreads and Sections of Bone Marrow.
Am.J.Clin.Path. 27:282-299,1957.

NUMBER 00961
Berman, L.
A Review of Methods of Aspiration and Biopsy of Bone Marrow.
Am.J.Clin.Path. 23:385-402,1953.

NUMBER 00962
Feldman, W.H.
Neoplasms of Domestic Animals.
1932.
This book reports the incidence of animal tumors, including those in the cat, with locations and descriptions.

NUMBER 00963
Nielsen, S.W.
The Malignancy of Mammary Tumors in the Cat.
North Amer.Vet. 33:245-252,1952.
Most common, and also the greatest of clinical importance among the feline tumors, is the mammary carcinoma. These mammary tumors are significant for their uniformity of type, all being of purely epithelial in origin & practically all adenocarcinoma. Another characteristic is their malignancy which is evidenced by their infiltrative and rapid growth together with a rendency to
and rapid growth together with a tendency to
recurrence. The report shows their age incidence between 8 & 12 years, failure of oophorectomy to influence them, and the necessity for radical mastectomy.

NUMBER 00964
Lierse, W.
Die Kapillarabstande in Verschiedened Hirnregionen der Katz.
Z.Zellforsch. 54:199-206,1961.

NUMBER 00965
Wirth-Dzieciolowska, E.

Niektore Zagadnienia Zwiazane Z Badaniami nad Efektem
Matki na Przykladzie Zwierzat Laboratoryjnych.
Zwierzieta Laboratoryjne 8 (1-2):76-82,1970.

NUMBER 00966
Scott, P.P.
Greaves, J.P.
Scott, M.G.
Nutrition of the Cat. IV. Calcium and Iodine Deficiency on a Meat Diet.
Brit.J.Nutr. 15:35-51,1961.
Kittens were fed raw or cooked heart exclusively. This diet was particularly deficient in calcium and iodine. After about 7 weeks, the kittens showed signs of nervousness, ataxia, and finally paralysis of the hind limbs. Osteoporosis (osteitis fibrosa), but not rickets, was observed. Paresis was due to pressure following collapse of bony structures. Thyroids were hyperplastic and enlarged, and kidneys were also heavier than normal. These cats exhibited all the signs described by veterinarians as osteogenesis imperfecta. Supplementation of the diets with calcium entirely prevented the occurrence of signs referable to the skeleton and partially prevented the thyroid hyperplasia. Fifty micrograms of iodine daily prevented gross enlargement of the thyroid and 100 micrograms daily completely prevented hyperplastic changes. Iodine supplementation delayed the onset of skeletal dystrophy.

NUMBER 00967
Skaggs, J.W.
Theobald, J.A.
Osteogenesis Imperfecta in a Kitten.
J.A.V.M.A. 130:450,1957.

NUMBER 00968
Bloom, F.
The Blood Chemistry of the Dog and Cat.
Gamma Publications, New York, 1960.

NUMBER 00969
Bloom, F.
The Urine of Dog and Cat.
Gamma Publication, New York.

NUMBER 00970
Reighard, J.
Jennings, H.S.
Anatomy of the Cat.
Henry Holt & Co., New York, 3rd Ed., 1934.

NUMBER 00971
Worden, A.N.
Waterhouse, C.E.
Sellwood, E.H.B.
Studies on the Composition of Normal Cat Urine.
J.Small Anim.Pract. 1:11-23,1960.

NUMBER 00972
Merg, F.R.
The Influence of Force Application to the Teeth Upon Tension Development of the Masseter and Digastric Muscles of the Cat.
Amer.J.Orthodontics 55(2):200,1969.

NUMBER 00973
Ardoin, W.H.
Changes in the Tension of the Masseter and Digastric Muscles of a Decerebrate Cat When Force Stimuli are Applied to Teeth.
Amer.J.Orthodontics 55(2):199,1969.

NUMBER 00974
Bystrzycka, E.
Korn, H.
Projections of the Slow-Conducting Myelinated Fibres of the Splanchnic Nerve on the Motor Cortex of the Cat.
Brain Research 12(1):253,1969.

NUMBER 00975
Warr, W.B.
Fiber Degeneration Following Lesions in the Posteroventral Cochlear Nucleus of the Cat.
Exp.Neur. 23(1):140.1969.

NUMBER 00976
Nielson, K.C.
Owman, C.
Santini, M.
Anastamosing Adrenergic Nerves From the Sympathetic Trunk to the Vagus at the Cervical Level in the Cat.
Brain Research 12(1):1,1969.

NUMBER 00977
Brown, T.S.
Kaufman, P.G.
Marco, L.A.
The Hippocampus and Response Preservation in the Cat.
Brain Research 12(1):86,1969

NUMBER 00978
Kirpekar, S.M.
Wakade, A.R.
Dixon, W.
Prat, J.C.
Effect of Cocaine, Phenoxybenzamine and Calcium on the Inhibition of Norepinephrine Output From the Cat Spleen by Guanethedine.
J.Pharm.Exptl.Ther. 165(2):166,1969.

NUMBER 00979
Bacelli, G.
Guazzi, M.
Mancia, G.
Zanchetti, A.
Effect of Total Sympathectomy on Cardiovascular Changes During Desynchronized Sleep in the Cat.
Bollet.De.Soc.Ital.Di Biol.Speriment.
44(20):1713-1716,1968.

NUMBER 00980
Mancia, G.
Becelli, G.
Adams, D.B.
Zanchetti, A.
Regional Blood Flows During Desynchronized Sleep in the Cat.
Boll.Soc.Ital.Biol.Sperimentale
44(20):1716-1718,1968.

NUMBER 00981
Bacelli, G.
Mancia, G.
Adams, D.B.
Zanchetti, A.
Cardiovascular Changes During Fighting Behavior in the Cat.
I. Supportive Fighting.
Boll.Soc.Ital.Biol.Sperimentale 44(20):1718-1720, 1968.

NUMBER 00982
Bacelli, G.
Mancia, G.
Adams, D.B.
Zanchetti, A.
Cardiovascular Changes During Fighting Behavior in the Cat.
II. Non-Supportive Fighting.
Boll.Soc.Ital.Biol.Sperimentale 44(20):1721-1722, 1968.

NUMBER 00983
Mancia, G.
Bacelli, G.
Adams, D.B.
Zanchetti, A.
Cardiovascular Changes During Fighting Behavior in the Cat.
III. Preparation For Fighting.
Boll.Soc.Ital.Biol.Sperimentale 44(20):1722-1725, 1968.

NUMBER 00984
Fazekas, A.T.
Obal, F.
Tissue Corticosteroid Fractions in the Cat.
Acta Physiologica Acad.Sci.Hungaricae 34(3):155,1969.

NUMBER 00985
Consolo, S.
Giacobini, E.
Karjalainen, K.
Monoamine Oxidase in Sympathetic Ganglia of the Cat.
Acta Physiol.Scand. 74(4):513,1968.

NUMBER 00986
Creed, K.E.
Wilson, J.A.F.
The Latency of Responce in Secretory Acinar Cells to Nerve Stimulation in the Submandibular Gland of the Cat.
Austral.J.Exptl.Biol.Med.Sci. 47(1):135,1969.

NUMBER 00987
Eliseeva, Z.V.
A Comparative Evaluation of Cytoarchitectonics in the Region of Vicariation of the Anterior or Posterior Extremity in the Somato-Sensorial Zones of the Brain Cortex of the Cat.
Proc.Acad.Sci.U.S.S.R. 184(3):743,1969.

NUMBER 00988
Capen, C.C.
Rowland, G.N.
The Ultrastructure of the Parathyroid Glands of Young Cats.
Anat.Rec. 162:327-339,1968.
The fine structure of the parathyroid glands of normal rapidly growing cats (9-22 weeks of age) was described and compared with the findings reported in other species. The predominating active chief cells were relatively electron-dense and contained well-developed organelles and frequent secretory granules. Inactive chief cells were

slightly larger and had a more electron-transparent cytoplasm.

NUMBER 00989

Sabo, A.
Rajcani, J.
Raus, J.
Karelova, E.
(Pathogenis of Aujesky's Disease in Cats.)
Arch.Ges.Visusforsch. 25:288-298,1968.

The spread of Aujesky's disease virus in 10 cats infected by mouth was studied histologically and by immunoflourescense and virus isolation. Primary replication took place in the pavement epithelium of tonsils and pharyngeal mucous membranes. The virus then penetrated to the deeper lymphatic tissue and reached the nerve fibres in the pre-tonsillar connective tissue.

NUMBER 00990

O'Reilly, K.J.
Whitaker, A.M.
The Developement of Feline Cell Lines For the Growth of Feline Infectious Enteritis (Panleucopenia) Virus.
J.Hyg.Camb. 67:115-124,1969.

Monolayer cultures were prepared from the lungs of eviscerated and decapitated carcasses of embryos obtained by caesarean section from healthy pregnant cats. At about the 30th passage, these cells lost their fibroblastic morphology to become polygonal. After a further 30 passages the monolayers exhibited foci of low cell density circumscribed by bands of cells stacked in disorganized arrangement.

NUMBER 00991

Geering, G.
Hardy, W.D.
Old, L.G.
DeHarven, E.
Brodey, R.S.
Shared Group-Specific Antigen of Murine and Feline Leukemia Viruses.
Virology 36:678-680,1968.

In gel diffusion tests, using antiserum to murine leukemia virus group-specific antigens, a precipitin band was formed with ether-treated feline leukemia virus and with extracts of tissue from 7 of 14 cases of feline lymphosarcoma.

NUMBER 00992

Malone, J.C.
Diagnosis and Treatment of Poisoning in Cats and Dogs.
Vet.Rec. 34:161-164,1969.

NUMBER 00993
Williams, R.H.
Textbook of Endocrinology, 4th Edition,
W.B.Saunders Co., Philadelphia, 1968.
A text on general endocrinology and mainly human clinical entities. The following are included notations regarding cats:
1."The adminstration of growth hormone to adult cats and dogs will lead to hyperglycemia and glycosuria within 1 week. If injections of growth hormone continued, persistent diabetes may ensue. The same treatment of puppies or kittens leads to increased growth without the development of diabetes."
2."The classic studies of Ransom and coworkers......that in the cat and monkey diabetes insipidus is contingent upon the complete degeneration or removal of the neurohypophysis."
3."Decoriticated cats, with extensive lesions that isolated the anterior hypothalus and pituitary from all neutral connections, could still regulate their water balance."

NUMBER 00996
Duval, M.
Le Placenta des Carnassiers.
J.de L'Anat.et de La Physiologie 29:249-340,1893.

NUMBER 00997
Duval, M.
Le Placenta des Carnassiers.
J.de L'Anat.et de La Physiologie 29:426-465,1893.

NUMBER 00998
Duval, M.
Le Placenta des Carnassiers.
J.de L'Anat.et de La Physiologie 29:663-729,1893.

NUMBER 00999
Duval, M.
Le Placenta des Carnassiers.
J.de L'Anat.et de La Physiologie 30:189-240,1894.

NUMBER 01000
Duval, M.
Le Placenta des Carnassiers.
J.de L'Anat.et de La Physiologie 30:649-715,1894.

NUMBER 01001
Norby, D.E.
Thuline, H.C.
Inherited Tremor in the Domestic Cat, Felis Catus

L.
Nature (London), 227:1262-1263,1970.
A domestic shorthair tom cat that produced some offspring with severe trembling when mated to one of his daughters was repeatedly mated to his female progeny as they matured. Of 13 daughters and 2 granddaughters, 4 daughters and 1 granddaughter produced affected offspring. Of 2 sons of the tom that were mated with the females that produced offspring manifesting the trembling, 1 produced 16 normal offspring, while the other produced 4 affected and 12 normal kittens. The original male produced no affected offspring when mated to unrelated females. The brains of affected kittens showed no gross or histological changes. After the onset of the trembling at 2-4 weeks of age, affected kittens began to lag behind their siblings in growth and development, and only one survived beyond 3-5 months of age. Examination of the available data suggested that the tremor was hereditary and probably due to the action of a single autosomal recessive factor.

NUMBER 01002
Barnett, S.K.
Munro, K.M.H.
Superfoetation of Mice.
Nature (London) 227:1343-1344,1970.
In a hybrid stock of mice maintained at either 21C or -3C, examples were found of litters born too soon after the birth of a previous litter tp be the result of a normal postpartum insemination. Mice of 2 inbred strains treated in the same way reproduced normally. It is suggested that unimplanted embryos had been retained in the fallopian tubes during pregnancy, & that these became implanted immediately after the birth of the normally developing litter.

NUMBER 01003
Egoscue, H.J.
A Laboratory Colony of the Polynesian Rat, Rattus Exulans.
J. Mammal. 51:261-266,1970.
A colony of R.exulans was maintained in captivity for 8 generations. Most monogamous pairs were compatible for life. Females were polyestrus & bred throughout the year. Litter size ranged from 1-10 (ave 3.8; mode 4). The min. interval between the date of pairing and the birth of the initial litter was 23 days, which probably approximates the gestation period for nonlactating pregnancies. Lactation prolonged pregnancy for 3-7 days. Post-partum heat usually occurred within 24 hours of parturition. The average number of litters born to each female per year was 5.2 (1-13), and the ave. number per lifetime was 6.3 (1-18). Few females bred longer than 12 months in captivity. The maximum number of young produced by a single female in a lifetime was 84 (18

litters). The ave. age of females at the first litter was 137.1 days (72-239). The youngest female to conceive was 49 days of age. The oldest breeding female bore her final litter when she was 782 days old. R.exulans appears promising as a laboratory animal. It is relatively easy to rear and virtually odorless. No disease of any kind was detected in the authors colony.

NUMBER 01004

Biefelt, S.W.
Wilson, A.J.
Redman, A.C.
Mcclellan, R.O.
Rosenblatt, L.S.
A Breeding Program For the Establishment and Maintenance of a Stable Gene Pool in a Beagle Dog Colony to be Utilized for Long-Term Experiments.
Am.J.Vet.Res. 30:2221-2229,1970.

A dog-breeding program was designed which provided for the production of dogs from a stable gene pool over an extended period for entry into a series of sequential and inter-related experiments. Random mating within a generation was used to maintain a stable gene pool (no full- or half-sib matings). This method forced the colony of dogs into a generation pattern, with different generations being discrete from one another. Each generation consists of 20 male and 40 female beagle dogs. The parental generation was selected to obtain a broad genetic base and relative freedom from physical defects and possible undesirable familial tendencies toward epilepsy. Subsequent generations of the breeding colony will contain 1 son and 2 daughters per sire and 1 daughter and not more than 1 son per dam. Within the applicable restrictions these breeder dogs will be picked at random.

NUMBER 01005

Loughman, W.D.
Frye, F.L.
Condon, T.B.
XX/XXY Bone Marrow Mosaicism in 3 Male Tricolor Cats.
Am.J.Vet.Res. 31:307-314,1970.

Marrow Cells of 3 male tricolor cats had chromosomal mosaicism for a normal male line (38,XY) and an intersex cell line (39,XXY). Examination of buccal mucosa cells and marrow or peripheral blood leukocytes for the nuclear female sex marker indicated the 3 cats had either generally intermediate nuclear sex or female nuclear sex. One male tricolor had portions of buccal mucosa that were entirely male, female or intermediate in nuclear sex. Spermatogonia were not seen in testicular tissue from one male tricolor cat.

NUMBER 01006

Rehfeld, C.E.

Definition of Relationships in a Closed Beagle Colony.

J.Am.Vet.Res. 31:723-732,1970.

Data on 1690 dogs from many combinations of ancestry, or relatedness, within the limits of the colony, were used to illustrate a method of characterizing an animal colony by means of the inbreeding coefficient, coefficient of relationship and ancestral composition. The value of these 3 criteria of breeding and relationship is assessed, using neonatal survival to illustrate the effects of inbreeding, and weaning survival the effects of outbreeding between subpopulations. Data are tabulated. Of 1201 dogs (71.1%) with some degree of inbreeding, 63.8% survived the 10 day neonatal period; as inbreeding increased, there was a marked trend for decreasing survival. In this colony, it has been found that while coefficients are helpful in breeding control and in pairing dogs for experimental studies, ancestral composition has been of most use.

NUMBER 01007

Robinson, R.

Devon Rex, A Third Rexoid Coat Mutant in the Cat.

Genetica 40:597-599,1969.

The mutant "Devon Rex", discovered at Buckfastleigh, Devon (England), in 1960, resembled the English (Cornish) rex mutant discovered by Searle and Jude in having bent vibrissae (where present) and a short, plush coat, but proved to be due to a different gene, since matings between the 2 mutants gave only normal-coated kittens. Devon Rex is attributed to an autosomal recessive gene (proposed symbol,re) in homozygous condition. Unlike the coat of the cornish mutant, which is devoid of guard hairs and awn hairs, that of the Devon Rex shows 2 forms of relatively stout hairs which probably represent grossly abnormal guard and awn hairs.

NUMBER 01008

601

Scott, P.P.

Greaves, J.P.

Retinal Degeneration and Vitamin A Deficiency in Cats.

Proc.Nutr.Soc. 23(2):XXXIV,1964.

Cats receiving a casein-based diet apparently can not store or utilize Vit A normally. This was evident when kittens were reared on a semipurified diet consisting of 35% casein, 36.7% sucrose or dextrin, 10% lard, 12% arachis oil, 3% sugar-beet residue, 2 per cent salt mixture and vitamins (including 250 or 2000 IU Vit A) a day. The kittens grew normally until 4 months of age but growth rate then declined and final weights were 15-40 per cent lower than those on adequate diets. Signs of Vit A deficiency developed with both low and high Vit A intakes and with both sucrose-casein and dextrose-casein diets, but developed more rapidly with low Vit A and with sucrose-casein diet. The pupils became dilated after 6-12 months, depending on the diet. A severe transient photophobia was the earliest symptom. The pupillary light reflex became increasingly delayed, retinal vessels increasingly attenuated and the cat unable to avoid objects. Progessive retinal degeneration was apparent histologically. As the syndrome developed, keratitis and corneal vascularization occurred. Squamous metaplasia occured in the mouth and skin. The fur became loose and unkempt and fetuses died in-utero or were aborted. The cats were apparently unable to store or utilize Vit A normally. Low liver, kidney and plasma concentrations were found at necropsy. Since cats can have low Vit A levels on meat diets without signs of deficiency, casein may be an inadequate protein.

NUMBER 01009

Yasgur, I.
Kopp, W.K.
Early Extraction of Permanent Canine Teeth in a Pet Lion.
Vet.Med./Small Anim.Clin. 59(5):463,1964.

The owner of a 4 1/2-month old, 56-lb. lioness requested that the fangs be removed from her pet lion. At this age, none of the permanent teeth had errupted; none of the deciduous teeth had been shed. A radiograph showed the permanent canine buds. It was deemed far easier from a surgical standpoint (and far safer from a restraint and anesthesia standpoint) to remove the fangs at this early age than after their eruption and full development. Pre-anesthetic sedation consisted of 75 mg propiopromazine HCl and 50 mg meperidine HCl. Surital was used for the anesthesia. The deciduous canines were removed by producing a flap and removing the soft alveolar plate, using a straight guage elevator. The permanent bud could then be seen as pearly white tissue immediately medial to the empty alveolus. It was easily removed with dental forceps. The cavity was curetted and freed of bone fragments. The gum flap was then sutured in position with 4-0 catgut. The procedure was repeated to remove the remaining fangs. During the entire procedure, bleeding was easily controlled and presented no problem. Combiotic was administered daily for 4 days postsurgery and recovery was uneventful. The cub seemed free of pain within 48 hours and did not resent examination of the incisions.

NUMBER 01010

Von Gerber, H.
Freudiger, U.
(Merits of Various Methods of General Anesthesia of Dogs and Cats.)
Schweiz.Arch.Tierheilk. 105:371-399,1963.

Various methods of general anesthesia of dogs and cats are judged as a result of observing 1223 dogs and 391 cats. The influence of the indication for operation on the quality of the narcosis is examined, and incidents and deaths occuring within 10 days of the operation are discussed. It was shown that a combination of Combelen-Polamivet is superior to Largactil-Polamivet in producing an analgesic twilight sleep in the dog. The amount to be injected must correspond to its effect. Care must be taken with old, enfeebled dogs. In canine sedation the use of Combelen combined with dextromoramodium (Paltrium, Ictrium) proved distinctly better than Combelen alone. For the cat, the use of pentobarbital is particularly considered. Vetanarcol, which was used, was not completely satisfactory, since the cat's resistant reactions, however slight, are considerably less pleasant than those of the dog.

NUMBER 01011

Henness, R.
Sloan, R.E.
The Composition of Milks of Various Species: a Review.
Dairy Sci.Abstracts 32:599-612,1970.

NUMBER 01012

Finco, D.R.
Extrarenal Causes of Uremia.
J.Amer.Vet.Med.Assoc. 154(11):1392,1969.

The veterinarian must consider primary extrarenal causes of uremia when the elevation of blood urea nitrogen or serum creatinine is detected. The extrarenal causes of uremia may be categorized as prerenal and postrenal. Postrenal causes are usually obstructive in nature and usually present less diagnostic difficulty. Prerenal causes of uremia are varied but a common denominator appears to be lack of adequate renal perfusion with blood.

NUMBER 01013

Osborne, C.A.
Low, D.G.
Finco, D.R.
Reversible VS. Irreversible Renal Disease in Dog and Cat.
J.Amer.Vet.Med.Assoc. 154(11):1392,1969.

The distinction between reversible and irreversible primary renal disease on the basis of clinical findings is often difficult. Most renal function tests indicate the functional competence of the kidneys at the time the tests are performed and do not indicate the acuteness or chronicity of the underlying renal lesions, or the likelihood of recovery from the disease. A history of progessive polyuria, nocturia, and polydipsia, and detection of progressive nonregenerative anemia, malnutrition, and renal osteodystrophy are findings which suggest that the underlying disease is chronic. Detection of proteinuria, or significant numbers of casts, RBC, WBC and bacteria by urinalysis are findings which suggest an active renal disease. Detection of persistent abnormalities in the urine by urinalysis, and demonstration of an increase in the severity of renal insufficiency by repeated renal function tests are findings which suggest a chronic progressive renal disease. The reversibility or irreversibility of primary renal failure is dependent on the nature of the underlying renal disease. Histopathologic evaluation of percutaneous renal biopsies may indicate the reversibility or irreversibility of the disease in question, since a specific morphologic diagnosis may often be established. The detection of lesions which are potentially reversible is justification for vigorous employment of specific therapeutic techniques. Control of chronic, progressive, irreversible renal failure with appropriate supportive and symptomatic therapy may allow the patient to enjoy additional months or years of life.

NUMBER 01014

Crago, W.H.
A Simple Method for Removing Urethral Calculi in Male Cats.
J.Amer.Vet.Med.Assoc. 154(11):1386,1969.

Urethral calculi and mucous plugs are easily removed using twisted stainless steel wire (no.26) with a round loop on the end. Cat is anesthetized, loop of wire is introduced into urethral opening and advanced forward while rotated between thumb and forefinger. Loop on end acts as an auger. Wire is removed after each few millimeters and cleaned. After wire has entered the urinary bladder it is then worked back and forth while bladder is compressed, until all urine has been expressed.

NUMBER 01015

Diperri, R.
Dravid, A.
Schweigert, A.
Himwich, H.
Effect of Alcohol on Evoked Potentials of Various Parts of the Central Nervous System in Cat.
Quart.J.Stud.Alcohol 29:20-37,1968.

NUMBER 01016

Nakai, Y.
Effects of Intravenous Infusion of Central Depressants on the Evoked Potential of the Auditory Cortex of Cats.
Jap.J.Pharmacol. 14:235-255,1964.

NUMBER 01017
Torres, F.
Warner, J.S.
Some Characteristics of Delayed Responses to Photic Stimuli in the Cat.
Electroenceph.Clin.Neurophysiol. 14:654-663,1962.

NUMBER 01018
Herman, M.M.
Ralston, H.J.
Laminated Cytoplasmic Bodies and Annulate Lamellae in the Cat Ventrobasal and Posterior Thalamus.
Anat.Rec. 167:183-195,1970.
Large and small laminated cytoplasmic bodies are reported in neurons and dendrites of the ventrobasal and posterior nuclear groups of the thalamus of the cat. The bodies are more frequently seen in dendritic profiles than in nerve cell bodies. They differ in size, as well as in number and complexity of orientation of the constituent tubules. Their topographic relationship to endoplasmic reticulum synapses and adhesion plaques is noted, and their possible evolution is discussed. A single collection of annulate lamellae is described in the perinuclear soma of one neurone.

NUMBER 01019
Key, F.J.
Kennedy, T.S.
Kawashima, K.
Roberts, D.
Hobbs, B.C.
The Use of Gamma Radiation for the Elimination of Salmonella from Frozen Meat.
J.Hyg.Camb. 68:293-311,1970.
The use of gamma radiation process for the elimination of salmonella from frozen meat is relevant to the treatment of boned-out horsemeat and kangaroo meat imported into the U.K. and intended for use as pets' meat. Examination of dose/survival curves produced for several serotypes of salmonella in frozen meat shows that a radiation dose of 0.6 mrad will reduce a population by at least a factor of 10 to the fifth power. The influence on the radiation resistance of Salmonellae of such factors as pre-irradiation growth in the meat and temperature during irradiation was examined and considered. Storage in the frozen state does not lead to the revival of irradiated salmonella organisms. The properties of salmonella survivors deliberately produced in meat using conditions of irradiation designed to simulate a commercial process were studied after 6 recycling treatments through the process. There were no important changes in characteristics normally used for identification of salmonella, but radiation resistance was lowered. Survivors grown in meat after radiation showed an abnormally long lag phase, and removal of competitive

flora in meat by the radiation treatment can influence the growth of salmonella organisms.

NUMBER 01020
Spradbrow, P.B.
Marley, J.
Portas, B.
Burgess, G.
The Isolation of Mycoplasmas From Cats With Respiratory Disease.
Aust.Vet.J. 46:109-110,1970.
Mycoplasma was isolated from 11 (mostly nasal swabs) of 160 samples from cats with respiratory disease. Of 2 isolates, one fermented glucose while the other metabolised arginine. Metabolism-inhibiting antibodies active against the arginine-metabolising mycoplasma were demonstrated in the serum of 6 of 20 cats at titres of 1:2 to 1:8. Antibodies against the glucose-fermenting mycoplasma were not detected in any of the 20 cats.

NUMBER 01021
De Boer, H.
(Primary Epithelial Tumors in the Lungs of Dogs and Cats: A Survey of 52 Cases).
Inaug.Diss.Tierarztl.Fak.Munchen, PP.134,1969.
Between 1956 and 1968, primary epithelial lung tumors from 43 dogs (ave. age 10 years) and 9 cats (ave. age 11 years) were examined at the Institute for Animal Pathology, Munich. Of the canine 35 and of the feline 7 neoplasms were adenocarcinoma. Squamous-cell carcinoma was seen in 5 dogs and 1 cat. Adenoma was seen in 2 dogs and 1 cat. Metastases outside the thoracic cavity were present in half the cases.

NUMBER 01022
Bonnet, P.
(Longevity in Cats).
Bull.Soc.Hist.Nat.Toulouse 104:260-262,1968.
The author reports that his siamese cat (a male castrated at 18 months of age) lived for 17 years and 8 months, although the ave. lifespan of cats is believed to be about 10-12 years. In 4 other cases made known to him, the lifespan was even longer: 18 years (2 cats, 1 a siamese, 21 and 20-22 years). At least 4 of the long-lived cats (and possibly all 5) were castrated males.

NUMBER 01023
Hamilton, J.B.
Hamilton, R.S.
Mestler, G.E.
Duration of Life and Causes of Death in Domestic Cats: Influence of Sex, Gonadectomy and Inbreeding.
J.Geront. 24:427-437,1969.

Castrated male cats outlived intact males. Life was prolonged to a greater extent when castration took place before rather than after sexual maturity. Mean age at death was similar in spayed females and castrated males, but the extent of prolongation of life after gonadectomy was not as marked in females as in males because intact females were longer lived than intact males. Purebred cats did not live as long as crossbreds, particularly in the case of castrated males.

NUMBER 01024
Christie, D.W.
Bell, E.T.
Studies on Canine Reproductive Behavior.
Proc.Soc.Endocr. 48:III-IV,1970.

NUMBER 01026
Hamner, C.E.
Jennings, L.L.
Sojka, N.J.
Cat Spermatozoa Require Capacitation.
J.Reprod.Fert. 23:477-480,1970.
Mature, random-bred male and female cats were used. Ovulation was stimulated in estrus queens by an intramuscular injection of IU HCG, and superovulation by injecting pro-estrus females with 150 IU PMS intraperitonealy followed 72 hours later by 50 IU HCG. It was found that matings upto 49 hours after HCG injection were fertile, but no fertilized eggs were recovered from matings 50 hours or more after HCG injection, i.e. 24 hours after ovulation. Freshly ejaculated spermatozoa failed to fertilize any eggs in vitro. A minimum in utero incubation time of 1/2 hour was required by 1 female to capacitate cat spermatozoa, but in general 2-24 hours uterine incubation was required for capacitation. 62% of 61 eggs, cultured with spermatozoa which had been capacitated for 2-24 hours were fertilized when cultured in heated rabbit serum, fertilized eggs showed normal cleavage upto 16 cells by the 3rd day, but then began to degenerate.

NUMBER 01027
Bloom, F.
Unilateral Exophthalmus Associated With Leukemia in a Cat.
Vet.Med. 32:1-2,1937.

NUMBER 01028
Eyestone, W.H.
Myelogenous Leukemia in a Cat.
J.Nat.Cancer Inst. 12:599-613,1951

NUMBER 01029
Meier, H.
Patterson, D.F.
Myelogenous Leukemia in a Cat.
J.Amer.Vet.Med.Assoc. 128:211-214,1956.

NUMBER 01030
Meier, H.
Gourley, G.
Basophilic (Myelocyte) or Mast Cell Leukemia in a Cat.
J.Amer.Vet.Med.Assoc. 30:33-40,1957

NUMBER 01031
Holzworth, J.
Meier, H.
Reticulum Cell Myeloma in a Cat.
Cornell Vet. 67:302-316,1957.

NUMBER 01032
Holzworth, J.
Leukemia in the Cat. I.Lymphoid Malignancies.
J.Amer.Vet.Med.Assoc. 136:47-69,1960.

NUMBER 01034
Schalm, O.W.
Veterinary Hematology.
Lea & Febiger, Philadelphia, 1961.

NUMBER 01035
Gilmore, C.E.
Gilmore, V.H.
Jones, T.C.
Bone Marrow and Peripheral Blood of Cats: Technique and Normal Values.
Path.Vet. 1:18-40,1964.

Examination of bone marrow and peripheral blood is necessary to diagnose and study many diseases affected the hematopoietic system of cats. A simplified technique for obtaining marrow from cats, modified from a previously reported method, employs local anesthesia and minimal restraint. Skin and periosteum over the iliac crest are anesthetized with 2% procaine; a 3/4-inch, 18 gauge needle with short beveled point and seated stylet is introduced into the ilium through a small skin incision. Marrow is aspirated with a syringe and smears are made directly Wright and Giemsa stains are used and 500 nucleated cells are differentiated. Average differential values on marrow from 15 clinically normal cats were: rubriblast 1.2%, prorubricyte 2.8%, rubricyte 15.1%, metarubricyte 18.2%, (total erythrocytic cells, 38.4%), myeloblast 1.1%, progranulocyte 2.8%, neutrophil myelocyte 5.9%, eosinophil myelocyte 0.3%, neutrophil metamyelocyte 15.0%, eosinophil metamyelocyte 0.2%, neutrophil band 14.7%, eosinophil band 0.3%, neutrophil segmenter 14.0%, eosinophil segmenter 1.3% (total myelocytic cells, 55.6%), lymphocytes 5.1%, plasma cells 0.5%, reticulum cells 0.3%. The average myeloid: erythroid ratio was 1.6:1. Peripheral blood for determing hematocrits (PCV), total leukocyte counts(WBC) and differential leukocyte counts on the same animals was obtained by puncturing the marginal ear vein. Average values for these determinations were: PCV 37%, WBC 15,250/cmm., segmenters (neutrophil) 59%, bands (neutrophil) 4%, eosinophils 6%, lymphocytes 27%, monocytes 3%.

NUMBER 01036
Brown, R.R.
Price, J.M.
Quantitive Studies on Metabolites of Tryptophan in the Urine of the Dog, Cat, Rat and Man.
J.Biol.Chem. 219:985-997,1956.

NUMBER 01037
Cotchin, E.
Further Examples of spontaneous Neoplasms in the Domestic Cat.
Brit.Vet.J. 112:263-272,1956.

NUMBER 01038
Cotchin, E.
Neoplasia in the Cat.
Vet.Rec.69:425-434,1957.

NUMBER 01039
McCunn, J., Edit.
Hobday's Surgical Disease of the Dog and Cat.
Williams and Wilkins Co., Baltimore, Md., 1953.

NUMBER 01040
Nielson, S.W.
Neoplastic Diseases.
Feline Medicine and Surgery, 1st Ed., American Veterinary Publications, Inc., Santa Barbara, Calif., 1964.

NUMBER 01041
Osborne, C.A.
Low, D.G.
Perman, V.
Neoplasms of the Canine and Feline Urinary Bladder: Clinical Findings, Diagnosis and Treatment.
J.A.V.M.A. 152:247-259,1968.

NUMBER 01042
Thoonen, J.E.
Hoorens, J.
Carcinoma in the Bladder of a Cat.
Tijdschr.Diergeneesk. 29:147,1960.

NUMBER 01043
Brown, A.M.
The Depressor Reflex Arising From the Main Left Coronary Artery of the Cat.
J.Physiol. 184:825-836,1966.

Stimulation of the preganglionic B fibres that run without synapse through the stellate also had no measurable effect on coronary resistance. Stimulation of the post-ganglionic SC fibres of the cardiac sympathetic nerves caused coronary vasodilation which occurred earlier than, and was initially independent of, the decrease in coronary sinus oxygen saturation. The injection of noradrenalin into the perfusion system had the same effect as stimulation of the SC fibres. In the K+-arrested heart, both noradrenaline and stimulation of the post-ganglionic nerves elicited coronary vasodilation without changing the oxygen saturation of coronary sinus blood. The intracoronary injection of acetylcholine caused coronary vasodilation followed by an increase of coronary sinus oxygen saturation. Vagal stimulation caused bradycardia and a fall in coronary resistance. Propranol blocked coronary vasodilation elicited by sympathetic stimulation or noradrenaline without affecting the vasodilation due to myocardial ischemia or acetylcholine. Atropine blocked coronary vasodilation evoked by acetylcholine without affecting that due to ischemia or noradrenaline. Therefore, smooth muscle of the coronary arteries has at least 3 different receptor sites from which vasodilation can be elicited. Hypertensin caused coronary vasoconstriction. The presence of sympathetic cholinergic vasodilator fibres innervating the coronary arteries could not be demonstrated.

NUMBER 01044
Eliasson, S.
Folkow, B.
Lindgren, P.
Uvnas, B.
Activation of Sympathetic Vasodilator Nerves to the Skeletal Muscles in the Cat by Hypothalamic Stimulation.
Acta Physiol.Scand. 23:33-351,1951.

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Busch, F.C.
Van Bergen, C.
Cat's Blood: Differential Counts of Leukocytes.
J.Med.Research 10:250,1903.

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Die Blut Morphologie der Laboratoriums Tiere.
Leipzig, 2nd Edit., 1927.

NUMBER 01047
Kleineberger, C.
Carl, W.
Die Blut Morphologie die Laboratoriums Tiere.
Leipzig, 1912.

NUMBER 01048
Scarborough, R.A.
The Blood Picture of Normal Laboratory Animals: the Cat.
Yale J.Biol. and Med. 3:276,1930-1931.

NUMBER 01049
Schmauch, G.
Ueber Endoglobulare Korperchen in den Erythrocyten der Katzen.
Virchow's Arch.F.Path.Anat. 156:201.

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Comparative Anatomy of the Placenta.
Ann.N.Y.Acad.Sci. 75:855,1959.

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Human and Comparative Placentation Including the Early Stages of Human Development.
Lancet 1:1054,1933.

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(Quantitative Comparisons of the Postnatal Changes of the Glia in the Corpus Callosum of the Cat).
Z.Zellforsch. 73:303-312,1966.

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Lucke, V.M.
Hunt, A.C.
Interstitial Nephoropathy and Papillary Necrosis in

the Domestic Cat.
J.Path.Cact. 89:723-728 (1965).

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Nakamatsu, M.
Goto, M.
Morita, M.
A Case of Generalized Amyloidosis in the Cat.
Jap.J.Vet.Sci. 28:259-265,1966.

NUMBER 01055
Seawright, A.A.
English, P.B.
Gartner, R.J.W.
Hypervitaminosis A and Deforming Cervical Spondylosis of the Cat.
J.Comp.Path. 77:29-39,1967.

NUMBER 01056
Seawright, A.A.
Steele, D.P.
Clark, L.
Hypervitaminosis A of Cats in Brisbane.
Austr.Vet.J. 44:203-206,1968.

NUMBER 01057
Ames, F.
Flea Collars-Con and Pro.
Cats Magazine, Sept. 1969.

NUMBER 01058
Fox, I.
Bayonna, I.G.
Armstrong, J.L.
Cat Flea Control Through Use of Dichlorvos-Impregnated Collars.
J.A.V.M.A. 155:1621-1623,1968.

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Fox, I.
Rivera, G.A.
Bayonna, I.G.
Controlling Cat Fleas With Dichlorvos-Impregnated Collars.
J.Econ.Entom. 62(5):1246-1249,1969.

NUMBER 01060
Fox, I.
Bayonna, I.G.
Armstrong, J.L.

Cat Collars Impregnated With Dichlorvos Ineffective Against Ear Mites.
J.Econ.Entom. 62:1503-1504,1969.

NUMBER 01061
Gershoff, S.N.
Norkin, S.A.
Vitamin E Deficiency in Cats.
J. Nutr. 77:303,1962.
Cats were administered purified diets containing varying levels of Vit. E, with or without tuna oil as a source of high unsaturated fatty acids, for up to 63 and a half months. Steatitis was observed only in cats on the diets deficient in Vit. E and containing tuna oil. Vitamin E gave complete protection against steatitis. Cats deficient in Vit. E, but receiving tuna oil, showed relatively mild deficiency symptoms, particularly muscle changes, after a year on the experimental diets.

NUMBER 01062
Morris, M., Jr.
Feline Degenerative Retinopathy.
Cornell Vet. 55:295-308,1965.
The authors report blindness and degenerative retinopathy in cats fed casein-based purified diets containing amounts of Vit. A considered more than adequate for other species of animals.

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Campbell, L.H.
Ocular Toxoplasmosis in Cats.
J.A.V.M.A. 154:141-152,1969.

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Danforth, C.H.
Morphology of the Feet in Polydactyl Cats.
Am.J.Anat. 80:143-171,1947.

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Howe, F., Jr.
A Case of Abnormality in Cats Paws.
Am.Nat. 36:511-526,1902.

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Anatomy of the Cat.
Henry Holt and Company., New York, 1935.

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Handbuch der Vergleidhenden Anatomie der Haustiere.
18 Aufl., Springer, Berlin.

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Beim Jagdbaren Wild.
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Dissection of the Cat.
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Anatomy of the Cat.
Holt and Comp., New York, 1930.

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Habel, R.E.
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Nomina Anatomica Veterinaria.
International Committee on Veterinary Anatomical
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A Study of the Cat.
Saunders Comp., Philadelphia and London., 1967.

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Die Knochen der Katze.
Allattani Kozlemenyek, 31-42,1934.

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Blood Changes in the Aged.
Eninburgh Med.J. 54:306-321,1947.

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Wintrobe, M.M.
Clinical Hematology.

Sixth Ed., Philadelphia, Lea & Febiger, 1967.

NUMBER 01076
Gershoff, S.N.
Legg, M.A.
O'Connor, F.J.
Hegsted, D.M.
The Effect of Vitamin D-Deficient Diets Containing Various Ca:P Ratios on Cats.
J.Nutr. 63:79,1957.

Vitamin D deficiency in cats was produced by maintaining them on Vit. D deficient purified diets containing different calcium:phosphorus ratios. Rickets was produced as shown by X-ray evidence, high serum alkaline phosphatase, and low bone ash values. More severe rickets was produced by a diet containing 1% calcium and 1% phosphorus than by one containing 2% calcium and 0.65 percent phosphorus. This may be the result of what appeared to be the poorer growth of cats fed the 2:0.65 ratio. A marked spontaneous improvement was observed in the condition of most of the cats surviving the acute rickets of the first year of the experiment. This probably indicates a very low Vit. D requirement for cats 18 months or older.

NUMBER 01077
Gershoff, S.N.
Andrus, S.B.
Hegsted, D.M.
Lentini, E.A.
Vitamin A Deficiency in Cats.
Lab. Investigation 6:227,1957.

The first symptom of Vitamin A deficiency in cats is a decrease in food consumption, followed by emaciation. Some animals show weaknesses of the hind legs with some signs of rigidity. Histological examinations of Vitamin A-deficient cats reveal the classic changes of squamous metaplasia in a number of organ systems, with bronchopneumonia being a common complication.

NUMBER 01078
Gershoff, S.N.
Andrus, S.B.
Hegsted, D.M.
The Effect of the Carbohydrate and Fat Content of the Diet Upon the Riboflavin Requirement.
J.Nutr. 68:75, 1959.

Kittens were fed isonitrogenous, semi-purified diets, varying in riboflavin content and ratio of carbohydrate to fat. The sysmptons of acute riboflavin deficiency were characterized chiefly by anorexia with resulting emaciation and death. In one experiment, acute riboflavin deficiency was accompanied by hair loss, particularly about the head. In a second experiment alopecia was not observed. In chronically deficient cats, cataracts were observed. None of the chronically deficient cats showed hair loss. High carbohydrate diets partially protected cats against riboflavin deficiency even though the carbohydrate used was sucrose. Fecal and urinary riboflavin determinations indicated that this effect was due to increased intestinal synthesis of high carbohydrate diets. Three milligrams of riboflavin per kg of diet appeared adequate when the high carbohydrate diet was fed and 4 mg when the low carbohydrate diet was fed.

NUMBER 01079

Gershoff, S.N.
Faragalla, F.F.
Nelson, D.A.
Andurs, S.B.
Vitamin B-6 Deficiency and Oxalate Nephrocalcinosis in the Cat.
Am.J. Med. 27:72,1959.
Am.J.Med. 27:72,1959.

Vitamin B-6 deficiency in cats is characterized by growth failure, emaciation, convulsions, anemia, kidney disease, and iron deposition in the liver. Kidney lesions in Vitamin B-6 deficient cats are associated with the presence of large amounts of kidney and urinary endogenous oxalate. These workers found that cats fed diets containing 2 mg of pyridoxine hydrochloride per kg of diet did not develope signs of pathology associated with Vitamin B-6 deficiency. However, since less oxalate was excreted by cats receiving 4 mg of pyridoxine hydrochloride per kg of diet than those receiving 2 mg, it has been suggested that the cat's requirement for Vitamin B-6 may be set above 2 mg per kg of diet

NUMBER 01080

Greaves, J.P.
Protein and Caloric Requirements of the Feline.
In Canine and Feline Nutritional Requirements,
Pergamon Press, New York, 1965.

The author has reviewed the literature on protein and calorie requirements of cats. He has calculated the theoretical net protein requirements for growth and maintenance in cats from birth to maturity based on available data for endogenous urinary and metabolic fecal losses and protein retained in the body with age. His data suggest that the minimum requirements of cats for protein vary from 19g/kg body weight/day, during the first week of life, to 2g/kg body weight/day, at maturity.

NUMBER 01081

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"sarcome dictyocytaire, var. gigantocellulaire" with nodal
and hepatic involvement in a 16-year old tabby.

NUMBER 01341
Ball, V.
Auger, L.
Classification Generale des Splenomegalies. Etude Speciale des Leucemies et Splenomegalies Leucemiques. Leucemie Lymphatique a Splenomegalie Predominante chez un Chat.
Rev.Vet. 76:661-729,1924.
A 4-year old male with lymphatic leukemia and splenomegaly; Didier's case of lymphatic leukemia with hepatomegaly; a case of Ball and Lombard of lymphatic leukemia involving thymus as well as nodes and spleen.

NUMBER 01342
Ball, V.
Auger, L.
Cancer Ganglionnaire Cervical Primitif et Bilateral chez le Chat (Lymphosarcome, Sarcome Lymphoblastique).
Rev.Gen.Med.Vet. 34:688-690,1925.
18 months old.

NUMBER 01343
Ball, V.
Collet, P.
Cancer Laterale du Jejuno-Ileon (Sarcome a Cellules Rondes) chez un Chat.
Bull.Soc.Sci.Vet.Lyon. 34:241-242,1931.
A 6-year old male.

NUMBER 01344
Bloom, F.
Unilateral Exophthalmos Associated with Leucemia in a Cat.
Vet.Med. 32:29-30,1937.
A 9-year old castrated male with orbital infiltration by atypical lymphoid cells and immature lymphocytes in the blood.

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Bodie, L.M.
What is Your Diagnosis?
J.A.V.M.A. 130:451,1957.
Possible thymoma or a malignant lymphoma (lymphosarcoma) in an 11-month old female siamese.

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Christoph, H.J.
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Beitrag Zur Leukose des Hundes.
Monatsh.Fur Vet.Med. 7:1-4,26-31, 1952.
Mentions 2 cases of lymphatic leukemia in the cat in the collection of the Vet. Path. Institute, Univ. of Leipzig.

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Vet.Rec. 63:67-75,1951.
Sarcomas of the mesenteric nodes and kidneys.

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Proc.Roy.Soc.Med. 45:671-674,1952.
Review of material of the Royal Vet. College.

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Further Examples of Spontaneous Neoplasms in the
Domestic Cat.
Brit.Vet.J. 112:263-272, 1956.

NUMBER 01350
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Innes, J.R.M.
Harvey, W.F.
Debatable Tumors: Lymphosarcoma.
Edinburgh M.J. 44:645-652,1937.
Lymphosarcoma of the lower ileum, mesenteric nodes and
kidney in an aged cat.

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Pseudo-Leukaemie bij eene Kat.
Tijdschr.Voor Veeartsenijkunde en Veeteelt
17:158-161,1890.
"Leucomen" of small intestine, mesentery, kidneys, liver,
heart and mediastinum with no increase in white blood
cells.

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Contribution a L'Etude de la Leucemie Lymphatique.
L'Hepatomegalie Predominante.
Thesis, Lyon, 1925.
Lymphatic leukemia and hepatomegaly in a male cat.

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Persistence et Hypertrophie du Thymus.
Bull.Soc.Centrale Med.Vet. 63:104,1909.
A mass exteding from the thoracic inlet to the diaphragm

and compressing heart and lungs in a 5-year old.

NUMBER 01354
Ippoliti, P.T.
Un Caso di Linfoadenosi Leucemica Nel Gatto.
Nuova Vet. 171:130-131,1939.
Annular growth of large intestine and associated nodes in a 10-year old cat. Microscopically, there was lymphoid infiltration in the lungs, liver, adrenals, nerves and lymphocytes and lymphoblasts in the arteries.

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Tarkiewicz, S.
(Clinical and Anato-Pathological Notes on Leucemia in a Persian Cat).
Med.Weter. 13:293-296,1957.
A case of lymphatic leukemia with enlarged nodes and spleen in female cat.

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Intestinal Cancer in the Cat.
Vet.Rec. 11:1278,1931.
Lymphosarcoma of the ileum and the kidneys in a male cat.

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Une Tumeur Maligne Provenant du Tissu Reticule de la Rate Chez un Chat.
Rev.Vet. 80:37,1928.
Endothelioma or malignant reticuloma of the spleen, liver and nodes in a cat.

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Thymoma in a Cat.
J.A.V.M.A. 112:245,1948.
A 2-year old Persian cat.

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Uber die Leukamien der Haustiere.
Deutsche Tierarztl.Wchnschr. 35:51,1927.
Two feline cases of leukemic lymphadenosis with enlarged spleen and nodes and blood lymphocytosis.

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Spontaneous Cat Tumors.
Cancer Res. 11:271,1951.
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The Zoological Distribution of Cancer.
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Zur Leukose der Fleishfresser.
Berlin U.Munch.Tierarztl.Wchnschr. 68:330-334,1955.
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Patterson, D.F.
Meier, H.
Surgical Intervention in Intestinal Lymphosarcoma in Two Cats.
J.A.V.M.A. 127:495-498,1955.
Cases of a 5-year old female and a 12-year old male cat.

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Petit, G.
Sarcome des Reins Chez Une Chatte.
Bull.Soc.Centr.Med.Vet. 55,1931.
A case of bilateral spindle-cell sarcoma in a cat.

NUMBER 01365
Petit, G.
Un Cas Remarquable de Lymphadenie Chez le Chat.
Rec.Med.Vet. 79:676,1902.
Generalized enlargement of lymph nodes, liver and spleen and thickening of the intestine, with lymphadenomas recognized microscopically in a cat.

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Lymphadenome de L'Intestin Chez le Chat.
Bull.Soc.Anat., Paris 10(Series 6):494,1908.
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Contribution a L'Etude de la Leucemie Lymphatique du Lymphoide Chez Les Animaux. La Splenomegalie Leucemique.
Thesis, Lyon, 1927.
A general discussion of leukemias, including a case of lymphatic leukemia with enlarged spleen and liver in a 5-year old male cat.

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Contribution a L'Etude des Tumeurs Derivees du Tissu Lymphoide Chez Les Animaux Domestiques.
Thesis, Alfort, 1935.
Lymphadenoma of the jejunum and mesenteric nodes in a 4- or 5-year old male cat, and lymphosarcoma of the mesenteric nodes, spleen and lung in another male cat.

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Some Nervous Disorders in Cats With Clinico-Pathological Studies.
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A case of reticulum-cell sarcoma of the kidneys, pancreas, lung and brain in a 14-year old male with a history of 3-months' decline, convulsions and dementia.

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Lymphadenoma in a Cat.
North Am.Vet. 29:306,1948.
Generalized lymphadenomatosis in a 2-year old part Persian male cat.

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Sarcoma Primitivo dei Reni in Un Gatto.
Clin.Vet. 32:49-51,1909.
Round-cell sarcoma of kidneys in a 14-year old male cat.

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Nuova Vet. 13:225-233,1935.
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Myelogenous Leukemia in a Cat.
Allied Vet. 25:12,1954.
Myelocytic infiltration of the liver and spleen in a
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Les Leucemies.
J.Med.Vet.Et de Zootech. 16:200-209,1912.
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A Case of Leukemia in a Cat, Erroneously Diagnosed
Clinically as Peritonitis.
Jap.Vet.Med.A.J. 11:139-141,1958.
A possible case of myeloblastic leukemia in a 6-year old
female cat.

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Leucose Myeloide Chez Une Chatte.
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female Abyssinian cat, with enlarged liver and spleen and
a chronic uterine infection of 2 years' duration.

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Myelogenous Leukemia in the Cat.
J.Nat.Cancer Inst. 12:599-613,1951.
Probable myelocytic leukemia in a 7-year old male tabby
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Myelogenous Leukemia in the Cat.
J.Small Anim.Med. 1:63-73,1952.
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Contribution a L'Etude de la Leucemie Myeloide Chez Les Animaux.
Dissertation, Lyon, 1928.
Refers, without any details, to the occurrence of myeloid leukemia in cats.

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Lund, L.
Uber die Leukamien der Haustiere.
Deutsche Tierarztl.Wchnschr. 35:51-53,1927.
A myelosis with infiltration of spleen, liver, nodes and kidneys by neutrophilic and eosinophilic myelocytes, myeloblasts, normoblasts, megaloblasts and megakaryocytes in a cat.

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Patterson, D.F.
Myelogenous Leukemia in a Cat.
J.A.V.M.A. 128:211-214,1956.
A case of myelocytic leukemia in a 18-month old female cat.

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Contribution a L'Etude du Cancer Chez le Chat.
Medical Thesis, University of Bordeaux, 1907.
A case of a cat with enlarged spleen showing histologically great masses of mast cells.

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Spontaneous Solitary and Multiple Mast Cell Tumors (Mastocytoma) in Dogs.
Arch.Path. 33:661-676,1942.
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Cutaneous Mast Cell Tumors in the Dog, Cat and Ox.
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Am.J.Path. 7:713-722,1931.

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Basophilic (Myelocyte) or Mast Cell Leukemia in a Cat.
J.A.V.M.A. 130:33-40,1957.
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Zur Pathologischen Anatomie der Mastzell-Leukamie der Katze.
Monatsh.Fur Vet-Med. 11:716-718,1956.
A case of a 14-year old male cat.

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Ueber Einem Fall Von "Leukamia" bei Einer Katze.
Berl.U.Munch.Tierarztl.Wchnschr. 12:195,1896.
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Proc.Mayo Clinic 34:474-478,1959.
Corneal ulcers developed in all of 10 experimental cats, in which the trigeminal nerve was completely interrupted. When the stellate ganglion and the nictitating membrane were removed prior to cutting the trigeminal nerve, a beneficial effect was observed in all animals, and only 1 showed evidence of a lesion. The specific influence of the sympathetic nerves in this protective mechanism is not known, but it is believed to be linked with increased vascularity and fluid permeability and better regenerative powers in the damaged cornea.

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J.A.V.M.A. 137:129-135,1960.
A kennel design for maintaining large numbers of dogs in outdoor pens has been discussed from the standpoint of the dog's general well being. Providing the dogs with adequate prophylaxis, space for exercise, proper nutrition, companionship, and protection from the weather minimizes many of the problems commonly observed in kennels. Cost of construction (about $250 per pen) and cost of operation and maintenance (about $10 per pair of dogs per month) are within practical limits.

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The Production and Use of Beagles For Radiobiological Research.
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J.Nutr. 74:191,1961.
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Vitamin A and Reproduction in the Cat.
J.Reprod.Fertil. 8:270,1964.
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Nutritional Blindness in the Cat.
ExpEyeRes. 3:357,1964.
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Experimental Ovulation and the Resulting Pseudo-Pregnancy in Anestrus Cats.
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La Gastro-Enterite Infectieuse des Chats Est-Elle Due L'Un Virus Filterable.

C.R.Soc.Biol. Paris 99:312-314,1928.

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J.S.Africa Vet.Med.Assoc. 13:15-16,1942.
The first report of a erythrocyte parasite in the ca
named Hemobartonella felis.

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Moss, L.C.
Infectious Anemia in Cats.
J.A.V.M.A. 122:45-48,1953.

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Jensen, R.
Feline Infectious Anemia I. Clinical Aspects.
Am.J.Vet.Res. 19:164-168,1958.

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Flint, J.C.
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Jensen, R.
Feline Infectious Anemia II. Experimental Cases.
Am.J.Vet.Res. 20:33-40,1959.

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J.A.V.M.A. 128:471-488,1956.

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Besch, E.D.
Feline Infectious Anemia.
Vet.Med. 53:494-500,1958.

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Vet.Rec. 71:437-438,1959.

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Kanawyer, W.L.
Feline Infectious Anemia.
Vet.Med. 51:17-22,1956.

NUMBER 01461
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Roberts, C.S.
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Kaplan, W.
Trichophyton Mentagrophytes Infections in Dogs and Cats.
J.A.V.M.A. 130:427-432,1957.

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Kaplan, W.
Ajello, L.
Oral Treatment of Spontaneous Ringworm in Cats With Griseofulvin.
J.A.V.M.A. 135:253-261,1959

NUMBER 01463
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Bromley, C.L.
Ringworm in Cats Caused by Microsporum Gypseum.
Vet.Med. 52:347-349,1957.

NUMBER 01464
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Onycomycosis in Cats Infected by Microsporumcanis Bodin.
Vet.Rec. 67:578-579,1955.

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Cryptococcosis in a Cat.
Cornell Vet. 42:12-15,1952.

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Holzworth, J.
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Cryptococcosis in the Cat: A Second Case.
Cornell Vet. 43:546-550,1953.

NUMBER 01467
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Mark, J.H.
Some Nervous Disorders in Cats With Clinico-Pathological Studies.
U.Penn.Vet.Ext.Quart. 131:84-88,1953.

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Histoplasmosis in a Cat.
J.A.V.M.A. 117:43-44,1950.

NUMBER 01469
Rowley, D.A.
Pathological Studies of Histoplasmosis: A Preliminary Report on Fifty Cats and Fifty Dogs From Loudon County, Virginia.
Publ.Hlth.Monog. 39:268-271,1956.

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Hitchcock, D.J.
The Life Cycle of Isospora Felis in the Kitten.
J.Parasitol. 41:383-397,1955.

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Holzworth, J.
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Toxoplasmosis in the Cat: Fourteen Cases.
J.A.V.M.A. 131:395-414,1957.

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Toxoplasmosis in the Cat: A Case Report.
Calif.Vet. Pages 27,1960.

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Neuropathology of Ovine, Bovine, Porcine and Feline Toxoplasmosis.
Ph.D. Thesis, Ohio St.Univ. 1959.

NUMBER 01475
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Toxoplasme Cerebrale du Chat.
Rec.Med.Vet. 134:12,1958.

NUMBER 01476
Toman, J.E.P.
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Oster, R.H.
Smith, D.C.
Origin of Cardiac Disorders in Thiamine-Deficient Cats.
Proc.Soc.Exp.Biol.Med. 58:65,1945.

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Calcium and Iodine Deficiency in Meat-Fed Cats With Reference to Osteogenesis Imperfecta.
Brit.Small Anim.Vet.Assoc., Congress Proceed.:84-89, 1959.

NUMBER 01478
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Harper, D.H.
A Study of Congenital Feline Cerebellar Malformations.
J.Comp.Neurol. 105:51-94,1956.

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Coffin, D.L.
Holzworth, J.
"Yellow Fat" in Two Laboratory Cats: Acid Fast Pigmentation Associated With a Fish-Base Ration.
Cornell Vet. 44:63-71,1954.

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Holzworth, J.
Recent Findings in Cat Disease.
Vet.Bull.Lederle 15(2),1956.

NUMBER 01481
Holzworth, J.
Disease Conditions rrominent in Cats.
Univ.Penn.Vet.Ext.Quart. 151:95-121,1958.

NUMBER 01482
Holzworht, J.   th
Thoracic Disorders in the Cat.
J.A.V.M.A. 132:124-130,1958.
The author mentions a number of organisms as being found in pyothorax in the cat, including coliforms, streptococci, staphylococci, and in some cases spirochetes and an organism of the "trench-mouth" type.

NUMBER 01483
Holzworth, J.
Anemia in the Cat.
J.A.V.M.A. 128:471-488,1956.

NUMBER 01484
Holzworth, J.
Diseases of Old Cats.
Small Anim.Clin. 1:32-34,1961.

NUMBER 01485
Holzworth J.
Coffin, D.L.
Pancreatic Insufficiency and Diabetes Mellitus in a Cat.
Cornell Vet. 43:502-512,1953.

NUMBER 01486
Holzworth, J.
Simpson, R.
Wind, A.
Aortic Thrombosis With Posterior Paralysis in the Cat.
Cornell Vet. 45:468-487,1955.
Description of a series of feline cases of aortic thrombosis. It is associated with thrombus formation in the heart resulting from disorders including simple dilation, endocarditis and myocarditis. Hydrothorax is a prominent feature in some, but not all, cases of thrombosis. The predominant site of fluid accumulation in the cat with venous congestion is the thoracic cavity.

NUMBER 01487
King, A.S.
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Protrusion of the Intervertebral Disc in the Cat.
Vet.Rec. 70:509,1958.

NUMBER 01488
King, A.S.
Smith, R.N.
Disc Protrusions in the Cat: Distribution of Dorsal Protrusions Along the Vertebral Column.
Vet.Rec. 72:335-337,1960.

NUMBER 01489
King, A.S.
Smith, R.N.
Disc Protrusion in the Cat: Age Incidence of Dorsal Protrusions.
Vet.Rec. 72:381-383,1960.

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Die Krankheiten der Katze.
M. and H. Schafer, Hannover, 1952.

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Genetics of the Domestic Cat.

Bibliog.Genetica 18:273-362,1959.

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Radiology in Small Animal Practice.
2nd Ed., North American Veterinarian, 1950.

NUMBER 01493
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Cat Practice.
Vet.Scope, Upjohn 5(1):3-6,1960.

NUMBER 01494
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Feline Practice.
Mod.Vet.Pract. 39:22-27,32,1958.

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Latimer, H.B.
The Prenatal Growth of the Cat.
III. The Growth in Length of the Two Extremities and of Their Parts.
Anat.Rec. 55:377-394,1937.

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Seamer, J.
Douglas, S.W.
A New Blood Parasite of British Cats.
Vet.Rec. 71:405-408,1959.

NUMBER 01497
Waterhouse, H.M.
Carver, D.S.
Growth Rate, Food and Calorie Consumption of Laboratory Cats.
ProcAnim.Care Panel 12:271,1962.
Diet was commerical canned feed.

NUMBER 01498
Bamber, R.C.
Correlation Between White Coat Color, Blue Eyes, and Deafness in Cats.
J.Genetics 27:416,1933.

NUMBER 01499
Todd, N.B.
Deafness and Blue Eyes in Cats.
J.A.V.M.A. 154:1245,1969.

NUMBER 01501
Bamber, R.C.
The Male Tortoise Shell Cat.
J.Genetics 12:209-216,1922.

NUMBER 01502
King, A.S.
Smith, R.N.
Disc Protrusion in the Cat: Ventral Protrusion and Radial Splits.
Res.In Vet.Sci. 1:301-307,1960.

NUMBER 01503
Abderhalden, E.
Die Bezeihung der Wachstumsgeschwindigkeit des Sauglings Zur Zusammensetzung der Milch Beim Kaninchen, bei der Katze und Beim Hunde.
Zeitschr.Physiol.Chem. 26:487,1899.

NUMBER 01504
Hoesslin, H.V.
Wachstumversuche an Katzen.
Zeitschr.Biol. 85:248,1926.

NUMBER 01505
MacKay, H.M.M.
Effect on Kittens of a Diet Deficient in Animal Fat.
Biocem.J. 15:19,1921.

NUMBER 01506
Thomas, K.
Uber die Zusammensetzung Von Hunde und Katze Wahrend der Ersten Verdoppelungsperioden des Geburtsgewichtes.
Arch.Anat.Physiol. Page 9,1911.

NUMBER 01507
Krehl, W.A.
Welt, I.
Nutritional Studies on the Cat.
Feder.Proc. 7:1948.

NUMBER 01508
Levaditti, C.
Lepine, P.
Verge, J.
Les Ultravirus des Maladies Animales.
Libraire Maloine, P.913,1943.

NUMBER 01509
Wills, J.H.
Electrolyte Changes in Submaxillary Glands During Stimulation.
Amer.J.Physiol. 135:164-174,1941.
The submaxillary glands of both dog and cat lose considerable amounts of potassium when stimulated by pilocarpine. The loses are small when stimulated for 35 minutes through the chorda tympani.

NUMBER 01510
Dingwall, J.S.
Surgical Management of Abdominal Trauma.
J.A.V.M.A. 159(11):1406-1413,1971.
A review, with some innovative techniques, of the surgical diagnosis and management of trauma in the dog and cat.

NUMBER 01511
Archibald, J.
Putnam, R.W.
Sumner-Smith, G.
Partial Nephrectomy: A Technique.
J.Small Anim.Pract. 10:415-417,1969.

NUMBER 01512
Archibald, J.
Cawley, A.J.
Reed, J.H.
Surgery of the Biliary Tract.
Mod.Vet.Pract. Aug., 1960.

NUMBER 01513
Dingwall, J.
Deboer, J.
Archibald, J.
A New Technique For Liver Resection in the Dog.
J.Small Anim.Pract. 7:429-433,1970.

NUMBER 01514
Dixon, R.T.
Perirenal Abscess.
Austral.Vet.J. 39:200-202,1963.

NUMBER 01515
Putnam, R.W.
Pennock, P.W.
Archibald, J.
Emergency Surgery Following Urogenital Trauma.
Mod.Vet.Pract. Aug., 1969.

NUMBER 01516

Sumner-Smith, G.
Deboer, J.
Partial Splenectomy: A Technique.
J.Amer.Anim.Hosp.Assoc. 7:1971.

NUMBER 01517

Von Bunge, G.
(Textbook of Physiological and Pathological Chemistry).
4th Edition, 1898.

Analysis of cat milk is (in %): Protein=7.0, ash=1.0. The time for the doubling of weight for kittens is given as 9.5 days.

NUMBER 01519

Biltz, R.M.
Pellegrino, E.D.
The Chemical Anatomy of Bone. I. A Comparative Study of Bone Composition in Sixteen Vertebrates.
J.Bone and Joint Surg. 51-A(3):456-466,1969.

Normal variations in the elementary composition of cortical bone from 16 different adult vertebrates were studied. Variations in the mineral (ash) and water content of bone exhibited what could be a necessary reciprocal relationship. The mineral components, calcium, phosphorus and magnesium were positively correlated with hexosamine (ground substance) & negatively correlated with OH-Proline (collagen). Although positively correlated, the variations in total CO2, sodium and citric acid were much less specific. All specimens exhibited a Ca/P molar ratio of 1.67 or larger depending on the amount of CaCO3 present. These differences in bone composition undoubtedly have physiologic significance & their further elucidation is necessary for the valid interpretation of experimental data in all areas of mineral metabolism.

Data on the one cat included in the tables are:
1. Specific gravity and distribution of major bone components in hydrated bone (volume %): Specific gravity=2.05, water=23.6, mineral (ash)=42.2, and organic+CO2=40.5.
2. Dry bone assay in mg/gram: For mineral fractions: Ash=691.0, Ca=266.0, P=123.5, Mg=3.9, and Na=6.2; or organic+CO2 fractions: CO2=29.0, OH-Proline=29.0, Hexosamine=1.2, Citrate=12.2, and Lactate=0.3.
3. Composition of ash: Ca=38.50 milligrams/100 milligrams of ash, Po4=54.76 milligrams/100 milligrams of ash, Co3=5.72 milligrams/100 milligrams of ash, Ca=19.25 milliequivalents/gram of ash, Po4=17.25 milliequivalents/gram of ash, Co3=1.90 milliequivalents/gram of ash; realtive molar concentrations of Ca=10.04, Po4=6.00, and Co3=0.99; Ca/P molar ratio=1.67; 98.9 milligrams carbonate apatite to 100 mg ash, and 0.0 milligrams calcium carbonate to 100 mg ash.

NUMBER 01520
Cotchin, E.
Some Tumors of Dogs and Cats of Comparative Veterinary and Human Interest.
Vet.Rec. 71:1040-1050,1959.

NUMBER 01522
Szabuniewicz, M.
Bailey, E.M.
Wiersig, D.O.
Treatment of Some Common Poisonings in Animals.
Vet.Med/Small Anim.Clin. 66(12):1197-1205,1971.
A short, but detailed review of poisoning therapy in large and small animals. Tables of agent, the antidotes and the dose of antidotes are especially helpful.

NUMBER 01523
Ikede, B.O.
Losos, G.J.
Isoun, T.T.
Platynosomum Concinnum Infection in Cats in Nigeria.
Vet.Rec. 89:635-638,1971.
Platynosomum concinnum (P.fastosum) infection is recorded for the first time in cats resident in Nigeria. The history and clinical signs and the gross and histopathological lesions in 5 naturally occurring infections are described. Whereas mild infections produced no clinical signs, heavy infections were fatal in at least 2 cases, the main lesions being a chronic cholangitis and cholangiectasis.

NUMBER 01524
Laem, G.
Walker, I.E.
Title Unknown.
Vet.Rec. 75:46,1963.
Eight of 16 cats naturally infected with Platynosomum concinnum showed symptoms of disease. The authors regard "lizard poisoning" as the most important cat disease in the Bahamas.

NUMBER 01525
Pass, M.A.
Surgical Repair of Esophageal Defects.
J.A.V.M.A. 159(11):1453-1456,1971.
The 2 most frequently used suture patterns for the esophagus are the 2-layered inverting technique and the everting technique utilizing horizontal mattress sutures through the entire esophageal wall. Prompt surgical intervention is the best treatment for large esophageal perforations. The treatment consists of closure of the esophageal defect, drainage of the surrounding tissues, and administration of antibiotics. Esophageal achalasia can

be treated best by double or single esophagomyotomy, which can be performed through a thoracic or an abdominal incision. Reconstruction of the esophageal hiatus may be necessary to prevent hiatal hernia and reflux esophagitis in some cases. Suturing of the muscular coat of the esophagus to the esophageal hiatus will also prevent hiatal hernia. Resection of the esophageal dilatation may be useful as an adjunct to esophagomyotomy in the treatment of esophageal achalasia.

NUMBER 01526
Cawley, A.J.
Gendreau, C.L.
Esophageal Achalasia in a Cat.

NUMBER 01530
Spector, W.S., edit.
Handbook of Toxicology, Vol. I., Saunders, Phila., 1956.
Various organic chemicals are given and their toxicity in the cat are as follows. Alpha-acetyl-digitoxin: LD50 = 0.5 mg/kg (IV); Amboside: LD50 = 827 mg/kg (IV); 16-anhydrodigitlinum verum monoacetate: LD50 = 6 mg/kg (IV); 5-anhydroperiplogenone: LD50 = 1 mg/kg (IV); anisylidiene-strophanthidin: LD50 = 1.9 mg/kg (IV); bovogenin E: LD50 = 0.20 mg/kg (IV); bovoside D: LD50 = 0.11 mg/kg (IV); bufagenine: LD50 = 0.22 mg/kg (IV); bufotoxin: LD50 = 0.27 mg/kg (IV); calotropin LD50 = 0.12 mg/kg (oral); caudoside: LD50 = 0.9 mg/kg (IV); cincophen sodium: LDca = 977 mg/kg (oral); convallotoxol: LD50 = 0.0869 mg/kg (IV); corchoroside A: LD50 = 0.0768 mg/kg (IV); corchoroside B: LD50 = 0.1413 (IV); gitorin: LD50 = 0.43 mg/kg (IV); gitoxigenin: LDca = 0.76 mg/kg (IV); gitoxin: LDca = 0.88 mg/kg (oral); gitoxoside: LD50 = 0.58 mg/kg (IV); heleborein: LDca = 1.9 mg/kg (IV); hydroxy acetate: LDca = 500 mg/kg (oral); leptoside: LD50 = 1.9 mg/kg (IV); mansonin: LD50 = 0.15 mg/kg (IV); melloside: LD50 = 1.3 mg/kg (IV); myristicin: LDca = 570 mg/kg (oral); odorobioside G monoacetate: LD50 = 0.67 mg/kg (IV); odorobioside-K: LD50 = 2.3 mg/kg (IV); odoroside-D: LD50 = 0.59 mg/kg (IV); odoroside-H monoacetate: LD50 = 0.27 mg/kg (IV); odoroside-K: LD50 = 4.7 mg/kg (IV); odorotrioside G monoacetate: LD50 = 0.62 mg/kg (IV); resibufogenin: LD50 = 5 mg/kg (IV); sarmentoside A3: LD50 = 0.089 mg/kg (IV); sarmentoside amonoacetate: LD50 = 3.6 mg/kg (IV); sarmentocide C: LD50 = 0.10 mg/kg (2V); sarmutoside: LD50 = 0.48 mg/kg (IV); sarnovide: LD50 = 0.15 mg/kg (IV); scillarenin: LD50 = 0.16 mg/kg (SC); trimethylstibime: LDca = 1370 mg/kg (SC); trinitrotoluene: LDca = 480 mg/kg (oral); urechitoxin: LD50 = 0.3558 mg/kg (IV); veneniferin: LD50 = 0.37 (IV).

NUMBER 01531
Stecker, P.G., edit.
The merck Index, An Encyclopedia of Chemicals and Drugs, 8th Edition, Merck and Co., Rahway, N.J.,1968.
Various organic chemicals are given, and their toxicity in the cat (in mg/kg) are as follows. cheiranthin: LDca = 0.044 (IV); cicutoxin: LDca = 7 (oral); cymarin: LD50 = 0.095 (IV); p-dinitrobenzene: LDca = 29 (oral); isoniazid: LD50 = 650 (oral); methyl-thiocyanate: LDca = 8.5 (oral); pyrroline: LDca = 300 (SC); strophanthidin: LDca = 0.28 (IV); tribromoethanol: LDca = 150 (oral).

NUMBER 01532
unknown.
J.Indust.Hyg.Toxic. 30:63,1948.
Oral LDca of N-butylcarbitol thiocyanate for the cat is 100 mg/kg.

NUMBER 01533
unknown.
J.Indust.Hyg.Toxic. 18:310,1936.
Oral LDca of N-butyl thiocyanate for the cat is 191 mg/kg.

NUMBER 01534
unknown.
J.Indust.Hyg.Toxic. 31:62,1949.
Oral LD50 of isopropenyl acetate in the cat is 3000 mg/kg.

NUMBER 01535
unknown.
Arch.f.Exper.Path.u.Pharmacol. 185:328,1937.
The intravenous LDca, in the cat, to N-butyl-K-strophanthidin is 0.35 mg/kg, and to ethoxyacetyl-K-strophanthin is 0.65 mg/kg.

NUMBER 01536
unknown.
Arch.f.Exper.Pathol.u.Pharmacol. 120:189,1927.
The intravenous LDca of ephedrine in the cat is 60 mg/kg.

NUMBER 01537
unknown.
Arch.f.Exper.Pathol.u.Pharmacol. 53:313,1905.
The intravenous LDca of physostigmine in the cat is 0.25 mg/kg.

NUMBER 01538

unknown.
Arch.Indust.Hyg.Occup.Med. 7:310,53.
The intravenous LDca of butyl-K-strophanthidin(iso-) in the cat is 0.43 mg/kg.
mg/kg, paulioside = 0.71 mg/kg, tanghiniferin = 0.9

NUMBER 01539

unknown.
J.Pharm.Exptl.Therap. 111:365,1954.
The intravenous LD50, in the cat, of desacetyl-tangkinin = 0.23 mg/kg, divaricoside = 0.165 mg/kg, paulioside = 0.71 mg/kg, tanghiniferin = 0.9 mg/kg, tanghinigenin = 1.0 mg/kg, tanghinin = 0.4 mg/kg and xasmalorin = 0.45 mg/kg, desgluco-cheiroside A = 1.3 mg/kg, desgluco-hellibrol = 0.09 mg/kg.

NUMBER 01540

unknown.
Pesticides Chemicals Official Compendium, Assoc. Amer. Pesticides Control Officials, Inc., Topeka, Kans., p.429,1966.
The oral LDca of 2-diphenylacetyl-2,3-indandione for the cat is 15 mg/kg.

NUMBER 01541

unknown.
J.Pharm.Exptl.Therap. 88:260,1946.
The oral LD50 of pernoston in the cat is 135 mg/kg.

NUMBER 01542

unknown.
J.Pharm.Exptl.Therap. 128:7,1960.
The LDca, in the cat, of pheniprazine (IV or SC) = 35 mg/kg.

NUMBER 01543

Patty, F.A.
Industrial Hygiene and Toxicology, Vol 1 & 2, 2nd edit., Interscience, N.Y., p.1916, 1958.
The SC LD50, in the cat, of phenyl phosphate trihydrate = 100 mg/kg, and of phosphorous acid, tri-o-cresyl ester = 100 mg/kg.

NUMBER 01544

unknown.
National Defense Research Comm., Office of Scientific Research and Development, p.119, 1943.
The intravenous LD50 of sulfide, bis (1-chloroethyl)-sulfarsphenamine for the cat is 60 mg/kg.

NUMBER 01545
Svesnikova, N.M., Editor.
Nematodyne Bolez.Sel'skokhoz Rast., Itogi Uses.
Soveshch Fita-Nematoden, 6th edit., Moscow, USSR,
Kolos.
The oral LD50 of thiazone for the cat is 79 mg/kg.

NUMBER 01546
unknown.
J.Pharm.Exptl.Therap. 73:312,41.
For the cat, the LD50 oral dose of
N,N-diethyl-5-methyl-1-phenyl = 500 mg/kg, of
1,2,3-triazole-4-carboxylic acid,
5-methyl-1-phenyl sodium salt = 1500 mg/kg; and the LDca
oral dose of
1,2,3-triazole-N,N-diiosobutyl-5-methyl-1-phenyl = 2000
mg/kg, of
1,2,3-triazole,N,N-5-trimethyl-1-phenyl =500 mg/kg.

NUMBER 01547
Evans, E.I.
The Transport of Spermatozoa in the Dog.
Amer.J.Physiol. 105:287-292,1933.

NUMBER 01548
Hart, B.L.
Kitchell, R.L.
External Morphology of the Erect Glans Penis of the
Dog.
Anat.Rec. 152:193-198,1965.

NUMBER 01549
Wilson, V.J.
Burgess, P.R.
Disinhibition in the Cat Spinal Cord.
J.Neurophysiol. 25:392-404,1962.

NUMBER 01550
Wilkinson, G.T.
Chronic Papillomatous Oesophagitis in a Young Cat.
Vet.Rec. 87:355-356,1970.
The occurrence of multiple papillomatous chronic inflammatory lesions in the intrathoracic portion of a one year old neutered female short-haired tabby cat is recorded. The clinical signs appeared to be associated more with the respiratory system than with the alimentary tract.

NUMBER 01551
Uzzell, B.P.
Sheer, D.E.

Decreases in 40-HZ EEG Activity in the Olfactory Bulb Following Gamma-Irradiation of the Cat.
Rad.Res. 46:343-352,1971.
The 40-HZ EEG activity of the olfactory bulb during 3, 24, and 48 hours, and 7-8 days following acute gamma irradiation were investigated with three total-dose groups of mature male mongrel cats that received either sham, 500-R whole body (wb), or 2000-3000-R head only (ho) irradiation. EEG recordings of the olfactory bulb were taken from alert, unrestrained animals and subjected to spectrum analysis. Two animals that received 800- and 1000-R total-doses showed no changes in the electrical activity of the olfactory bulb following irradiation. A 40-HZ loss observed in the olfactory bulb recording during 3- and 24-hour periods following irradiation was transitory in the 2000-3000-R ho group; whereas, the same loss observed in the 500-R wb group during the 7-day postirradiation period was not transitory. Serotonin (5-HT) content of olfactory tissue tended to increase and norepinephrine (NE) content tended to decrease slightly in the 2000-3000-R ho group during the 3-hour postirradiation period. The 40-HZ loss in the ho group was related to an imbalance in NE and 5-HT content and to the actions of elevated 5-HT on inhibitory synapses in the olfactory bulb.

NUMBER 01552
Turner, W.T.
Use of Megesterol Acetate in the Treatment of Miliary Eczema in the Cat.
Vet.Rec. 88:315-316,1971.
Excellent results have been observed using Megesterol acetate on approximately 50 cats with miliary eczema. The only recurring side effect noticed was an increase in appetite.

NUMBER 01553
Penny, R.H.C.
Carlisle, C.H.
Davidson, H.A.
The Blood and Marrow Picture of the Cat.
Br.Vet.J. 126:459-464,1970.
This paper describes the haematological findings on a series of male and female cats. For the red and white cell series 128 and 199 samples were used respectively. Also recorded is the myelogram for a series of sixty biopsy samples of bone marrow taken from the iliac crest. Results are presented as means and standard deviations or ranges.

NUMBER 01554
Schryver, H.F.
Title Unknown.
Am.J.Vet.Res. 24:1012.

Normal blood values extracted from article by Penny et al. Accession number 01553. Also reports percentage mitosis from femoral marrow from 10 cats as 0.61 +/- 0.16

NUMBER 01555
Work, K.
The Incidence of Toxoplasma Antibodies Among Dogs and Cats in Denmark.
Acta Path.Microbiol.Scand. 75:447-456,1969.
The prevalence of Toxoplasma antibody is reported to be 62% in cats and 42% in dogs.

NUMBER 01556
Parmley, W.W.
Rabinowitz, B.
Chuck, L.
Bonorris, G.
Katz, J.P.
Comparative Effects of Sotalol and Propranolol on Contractility of Papillary Muscles and Adenyl Cyclase Activity of Myocardial Extracts of Cat.
J.Clin.Pharmacol. 12(4):127-135,1972.
The effects of sotalol and propanolol on the contractile activity of isolated cat papillary muscles were determined. Sotalol produced a 13% increase in the force development at dose levels of 10 to the minus 3 and 10 to the minus 4 M, while propranol had only negative inotropic effects at dose levels greater than 10 to the minus 6 M. The positive inotropic effects of sotalol were maintained despite catecholamine depletion by pretreatment of cats with reserpine. Comparative beta-blockade studies with isoproterenol revealed that propranol (pA-subscript 2 = 7.99) was about 200 times more potent than sotalol (pA-subscript 2 = 5.66) as a beta-adrenergic blocker, at equimolar doses. Propranol caused a reduction in adenyl cyclase activity of myocardial extracts of cat at doses greater than 10 to the minus 9 M, with an increasingly greater effect above 10 to the minus 4 M. By contrast, sotalol produced a small (9%) but significant increase in adenyl cyclase activity at 10 to the minus 5 M, and did not produce depression until doses larger than 10 to the minus 4 M. Although the ability of sotalol to increase force and adenyl cyclase activity suggests that it has sympathomimetic effects, other evidence contradicted this conclusion. Irrespective of its precise mechanism of action, the present study suggests that sotalol may be useful as a beta-adrenergic blocking agent in clinical situations where less myocardial depression is desirable

NUMBER 01557
Roman, C.
Tieffenbach, L.
(Electrical Activity of Esophageal Smooth Muscle in Vagotomized and Anesthetized Cats.

J.Physiologie 63(8):733-762,1971.
A study of motor function in the smooth portion of the thoracic oesophagus was conducted in bilaterally vagotomized and anaesthetized cats by recording electromyographic activity (E.M.G.) from the oesophageal musculature with the aid of external electrodes placed on the serous surface. Apart from the peristalsis, low amplitude E.M.G. activities were recorded. These bursts of potential accompanied a shortening of the organ without modification of the intraluminar pressure; this is a proof for a contraction of longitudinal muscle fibres. Moreover, the activity was propagated either in the oral-aboral direction, or the opposite direction. The direction of propagation can change abruptly during the course of the same experiment. This type of motor function is no doubt comparable to the "pendular" movements of the intestine. During the so-called "tertiary" peristalsis, which is induced by inflating a small intra-oesophageal balloon, one can record at each point the low amplitude E.M.G. potentials which correspond to the activation of the longitudinal musculature and then, later, high amplitude potentials corresponding to the contraction of the circular musculature. This double activity propagates itself in the oral-aboral direction. From a functional point of view, we have shown that the force of peristaltic contraction, or rather the size of the E.M.G. discharge, is a function, within certain limits, of the size of the transported bolus and the distension of an oesophageal segment which induces and excitation (i.e. contraction) at the same level produces at the same time an inhibition of aboral segments. It would seem to be an application of the famous "law of the intestine" of Bayliss and Starling to the oesophagus.

NUMBER 01558
Hwang, K.
On Tertiary Peristalsis of the Esophagus of the Cat.
Am.J.Physiol. 6:781-796,1948.

NUMBER 01559
Mei,N.
(Electrophysiology Studies of the Sensory Receptors of the Thoracic Esophagus in the Cat.)
C.R. Acad.Sci.,Paris 260:302-305,1965.

NUMBER 01560
Roman, C.
Orengo, M.
Tieffenbach, L.
(Electromyographic Studies of the Longitudinal Muscle of the Esophagus of the Cat.)
J.Physiol.Paris 61(Suppl. 2):390,1969.

NUMBER 01561

Barron, K.D.
Chiang, T.Y.
Daniels, A.C.
Doolin, P.F.
Subcellular Accompaniments of Axon Reaction in Cervical Motoneurons of the Cat.
Progress in Neuropathology, date unknown

Electron microscopic examination of axon reaction in cervical motoneurons was carried out in cats surviving brachial plexectomy for 3, 7, 15, 21, 28 and 60 days. Alteration of the ER began in the region of the axon hillock and was characterized by an early (7-day) loss of the membranous component. Ribosomes retained a clustered arrangement, and at later stages of the response a proliferation of closely-packed aggregates of rosette ribosomes was apparent. Packets of closely spaced, smooth cisterns derived from granular ER and resembling , subsurface cisterns were prominent in chromatolytic motoneurons as were aggregates of vesicular and vacuolar profiles which did not have continuity with ER or Golgi membranes. The Golgi apparatus displayed peripheral dispersion (retispersion) without apparent alteration in its constituent membranes. Nucleolar vacuoloids, vacuolated dense bodies, a prominence of neurofilaments and plasmalemmal protrusions were other accompaniments of neuronal chromatolysis. In the neuropil were noted invasion by dark glia, neurofilamentous hypertrophy of axons, and astrocytic and endothelial hypertrophy. Axon reaction in cervical motoneurons of the cat differs from retrograde neuronal atrophy in LGB of this species. Vacuolar dilatation of the ER and breakup of rosette ribosomes into single units are seen in LGB neurons after section of their axons while Golgi retisperision and proliferation of subsurface cisterns are not encountered. Autophagic vacuoles and nuclear furrowing occur in retrograde atrophy of LGB neurons but are absent from chromatolytic motor nerve cells. Nucleolar vaculoids are seen in the latter but not in retrograde atrophy of LGB. Peculiar to the environs of chromoatolytic motoneurons were unusual astrocytes containing numerous randomly distributed, smooth membranous channels. The possible significance of these differences between axonal reactions in the two neuronal populations, the one projecting peripherally, the other centrally, are discussed. Quantitative evaluation of electron micrographs indicated a reduction in the concentration of mitochondria and lysosomes 60 days after nerve section.

NUMBER 01562

Barnard, R.I.
Experimental Changes in End-feet of Held-Auerbach in the Spinal Cord of the Cat.
J.Comp.Neurol. 73:235,1940.

NUMBER 01563
Barron, K.D.
Daniels, A.C.
Chiang, T.Y.
Dooling, P.F.
Fine Structure of Chromatolytic Feline Motoneurons.
Exp.Molec.Path. 12:46,1970.

NUMBER 01564
Mugnaini, E.
Walberg, F.
An Experimental Electron Microscopical Study of Cerebellar Corticovestibular Fibres in the Cat Lateral Vestibular Nucleus (Deiter's Nucleus).
Exp.Brain Res. 4:212,1967.

NUMBER 01565
Prineas, J.
The Pathogenesis of Dying-back Neuropathies. II. An Ultrastructural Study of Experimental Acrylamide Intoxication in the Cat.
J.Neuropath.Exp.Neurol. 28:598,1969.

NUMBER 01566
Sterling, P.
Kuypers, H.G.J.M.
Anatomical Organization of the Brachial Spinal Cord of the Cat. I. The Distribution of Dorsal Root Fibers.
Brain Res. 4:1,1967.

NUMBER 01567
Moussa, T.A.
An Experimental Study on the Effect of Axon Sectioning on the Cytoplasmic Components of the Corresponding Neurons.
Cellule 57:319,1956.
A study of spinal motoneurons and root ganglion cells of the cat.

NUMBER 01568
Penfield, W.G.
Alterations of the Golgi Apparatus in Nerve Cells.
Brain 43:290,1920.
A study of spinal motoneurons and root ganglion cells of the cat.

NUMBER 01569
Prineas, J.
The Pathogenesis of Dying-back Polyneuropathies. I. An Ultrastructural Study of Experimental Triortho-cresyl Phosphate Intoxication in the Cat.

J.Neuropath.Exp.Neurol. 28:571,1969.
After crushing the posterior tibial nerve at the ankle, the author noted that feline spinal neurons supplying the foot muscles showed severe disruption of the endoplasmic reticulum. Also described is a reduction of the size of rough endoplasmic reticulum aggregates, the component tubules of which were shorter than normal while there was a "freeing" of polyribosomes with the appearance of disper[illegible], single cytoplasmic granules of ribonucleoprotein.

NUMBER 01570
Brunden, M.N.
Clark, J.J.
Sutter, M.L.
A General Method for Determining Normal Ranges Applied to Blood Values of Dogs.
Am. J. Clin. Path. 53:332-339,1970.
This communication describes a method for determining the normal (tolerance) limits of a stable population which makes no assumptions as to the form of the population distribution and is applicable to either discrete or continuous data. This method, when applied to normal dog blood determinations, is shown to be consistent with the data for all parameters as opposed to the classical method which assumes a gaussian distribution. In many cases, similarities exist in the ascertained normal range between the two methods, but to determine whether the prevalent method has led to erroneous results would necessitate exhaustive statistical treatment. This method is useful because of its generality and because it is not necessary to find appropriate transformations or distribution functions. Although the general method may not be as efficient when the population distribution is known, it is felt that is simplicity outweighs any considerations of efficiency, especially in cases where a large sample is available.

NUMBER 01571
Herrera, L.
The Precision of Percentiles in Establishing Normal Limits in Medicine.
J. Lab.Clin.Med. 52:34-4281958.

NUMBER 01572
Hoffman, R.G.
Statistics in the Practice of Medicine.
J.A.M.A. 185:854-873,1963.

NUMBER 01574
Sander, C.H.
Landgham, R.F.
Myelolipoma of the Spleen in a Cat.

J.A.V.M.A. 160(8):1101-1103,1972.
A report of the pathological picture of a myelolipoma in a 16-year old spayed female.

NUMBER 01575
Gorley, I.M.
Popp, J.A.
Park, R.D.
Myelolipomas of the Liver in a Domestic Cat.
J.A.V.M.A. 158:2053-2057,1971.

NUMBER 01576
Heidary, H.
Neuron Populations in the Cerebellum of the Cat.
Experientia 28:313-314,1972.
A ratio of 1 to 325 Purkinje to granular cells is estimated. Other cell-type ratios are given.

NUMBER 01577
Lesbouyries, ?
Berthelon, ?
(Sex Hormone Therapy in the Domestic Carnivores.)
Bull.Acad.Vet.France 10:126-130,1937.
A french-language review of the application of sex hormones and related hormones to the therapy of clinical situations in the dog and cat. Conditions discussed includes uterine infections, ovulation, and prostatic enlargement.

NUMBER 01578
Dewhurst, C.J.
Beazley, J.M.
Cambell, S.
Assessment of Fetal Maturity and Dysmaturity.
Am.J.Obstet.Gynecol. 113(2):141-149,1972.
A review and discussion of normal and non-normal growth of the fetus. Results of fetal measurements by ultrasonic method are presented.

NUMBER 01579
Lewis, H.E.
The Feeding of Laboratory Animals.
J.Anim.TechnicianAssoc. 8:36-41,1957.
This is a brief general survey of the main aspects of the feeding of such laboratory animals as rats and mice, cats guinea pigs, monkeys, pigs and dogs. The information is largely based on the proceedings of a symposium held by the Nutrition Society (1957).

NUMBER 01580
Hinman, J.W.

Developing Applications of Prostaglandins in Obstetrics and Gynecology.
Am.J.Obstet.Gynecol. 113(1):130-138,1972.
A review of the medical use of prostaglandins in reproductive situations. Contains 69 citations.

NUMBER 01581
Bentley, M.A.W.
Waterlow, J.
Feline Urinary Retention: An "Epidemic". A Letter.
Vet.Rec. 90(21):612,1972.
We, too, are having an "epidemic" of feline urinary retention and haematuria. From March 1st (when it became obvious that something unusual was happening) until April 17th we have seen seven neutered males with urinary retention and four neutered females with haematuria. The ages vary from two years to eight years and the group included one Siamese and one Abyssinian. The only apparent common factor involved was the feeding of dehydrated foods of one or more varieties to 10 of these animals. The one cat not to have eaten any dehydrated food was presumably our "norm" for the seven-week period, or the case we could have expected anyway. Withdrawal of the dehydrated foods and the administration of urinary sedatives and antibiotics, with or without steroids, relieved the haematuria in the females, although the frequency and stress remained for some weeks. The obstructive symptoms in the male cats was more persistent and necessitated prolonged treatment, and, in one cat, euthanasia.

NUMBER 01582
Garrett, J.R.
Howard, E.R.
Effects of Rectal Distension on the Internal Anal Sphincter of Cats.
J.Physiol 222:85-86P,1971.
These experiments suggest that the tone of the internal anal sphincter is under complex neural control involving cholinergic and alpha-adrenergic motor pathways and beta-adrenergic and non-cholinergic non-adrenergic inhibitory pathways. Reflex responses to rectal distension are influenced by all of these mechanisms.

NUMBER 01583
Casseday, J.H.
Neff, W.D.
Auditory Localization: The Role of the Trapezoid Body.
J.Acoustical Soc.Amer. 49(1):92,1971.
The effects of transection of the trapezoid body upon the cat's ability to localize sounds were investigated. Four cats were trained to localize pulses of broad-band noise in a free-field situation, and their thresholds for

minimal detectable angle were determined. After transection of the trapezoid body, each animal was tested for retention of the localization habit. Two cats retained the localization habit and showed little or no loss in threshold for localization; the other two failed to retain the habit and were unable to relearn to localize. Other auditory tests on the latter two animals indicated that they could learn to respond to a sound signal and that they could learn to discriminate between tonal patterns (high-low-high versus low-high-low). Electrophysiological records, obtained from each cat after testing was completed, showed that evoked potentials could be obtained from auditory areas of the cerebral cortex when click stimuli were presented to the ear. A comparison of the anatomical evidence for animals that retained the localization habit and those that were unable to relearn siggests that the anterodorsal portion or the trapezoid body may be crucial for localization.

NUMBER 01584

Dolan, T.R.
Bredberg, G.
Ades, H.W.
Neff, W.D.
The Behavioral and Histological Effects of Auditory Over-exposure on the Cat.
J.Acoustical Soc.Amer. 49(1):92,1971.

The behavioral and histological effects of overstimulation on the auditory system of the cat are being examined. Thus far, the exposure stimuli considered have been tones between 125 and 4000 Hz at several stimulus intensities and duration. Stimulation levels have been varied from 120 to 160 dB SPL, and durations between 1 and 4 h have been examined. One of the initial results is that the amount and locus of damage resulting from exposure and the associated effects on audibility are most difficult to predict at low exposure frequencies. At 125 Hz, for example, seven animals have been exposed for 4 h at intensities between 150 and 160 dB SPL. The exposure caused either no apparent damage and no associated hearing loss or almost total damge along the entire length of the cochlea and nearly complete hearing loss. These and other results from exposure frequencies of 1, 2, and 4 kHz will be described.

NUMBER 01585

Pauli, M.
Carpenter, J.
Title Unknown.
Iowa State Univ. Vet. 32(2):55-57,1970.

A report of Horner's syndrome in the cat.

NUMBER 01586
Mandelker, L.
Practice Pointers.
Vet.Med./Small Anim.Clin. 67(7):718,1972.
To remove blood stains from a dog or cat after surgery or a bloody venipuncture, wash the area with a surgical soap.

NUMBER 01587
Glasofer, S.
Practice Pointers.
Vet.Med./Small Anim.Clin. 67(7):718,1972.
Tranquilizers sometimes make excellent appetite stimulants for homesick dogs and cats that will not eat while hospitalized or boarded.

NUMBER 01588
Jackson, W.
Practice Pointers.
Vet.Med./Small Anim.Clin. 67(7):718,1972.
Large ulcerated and traumatized area of skin infection sometimes clear up more quickly if treated with home tenderizer cheimicals.

NUMBER 01589
Vell, J.M.
Bieri, J.G.
Breuer, L.H., Jr.
Gershoff, S.N.
Hoekstra, W.G.
Portman, O.W.
Reid, M.E.
Warner, R.G.
Nutrient Requirements of Laboratory Animals.
Nat.Aca.Sci., No.10, 2nd rev. edit., 1972.
The chapter on the cat, by S.N. Gershoff, comprises a review of the literature on the nutrition of the cat. He states that many of the commercial diets are inadequate.

NUMBER 01590
Ahmad, B.
The Fate of Carotene After Absorbtion in the Animal Organism.
The cat does not utilize beta-carotene as a source of Vit. A.

NUMBER 01591
Braham, J.E.
Villarreal, A.
Bressani, R.
Effect of Lime Treatment of Corn on the Availability of Niacin for Cats.
J.Nutr. 76:183,1962.
Cats can utilize niacin from raw and lime-treated corn to

an equal extent.

NUMBER 01592
Cordy, D.R.
Experimental Production of Steatitis (Yellow Fat Disease) in Kittens Fed a Commercial Canned Food and Prevention of the condition by Vitamin E.
Cornell Vet. 44:310,1954.
The author produced vitamin E deficiency in cats by feeding them commercial cat food high in ash content. The deficiency state was characterized by orange or orange-tan colored fat (steatitis). In some kittens anorexia occurred, followed by death. Regenerative muscle lesions and leg weakness were observed. There was little edema, and hemorrhages were absent in the fat. Splenomegaly occurred in some of the kittens.

NUMBER 01593
Da Silva, A.C.
Fried, R.
De Angelis, R.C.
The Domestic Cat as a Laboratory Animal for Experimental Nutrition Studies. III. Niacin Requirements and Tryptophan Metabolism.
J.Nutr. 46:399,1952.
The symptoms of niacin deficiency in cats is described. It is primarily characterized by diarrhea, emaciation and death, with no buccal or skin lesions. As little as 1-3 mg of niacin given subcutaneously to niacin-deficient cats evoked a weight gain response of 100-300 g during a 4- to 8-day period. Tryptophan is not converted to niacin.

NUMBER 01594
Da Silva, A.C.
De Angelis, R.C.
Pontes, M.A.
Guerios, M.F.M.
The Domestic Cat as a Laboratory Animal for Experimental Nutrition Studies. IV. Folic Acid Deficiency.
J.Nutr. 56:199,1955.
Folic acid deficiency was produced in cats by feeding a semipurified diet deficient in folic acid and containing sulfaguanidine or sulfathalidine. No folic acid deficiency was produced without the addition of the therapeutics. The signs of deficiency were weight loss, macrocytic anemia, and leukopenia. Weight responses were obtained with single doses of 1 mg folic acid or two doses of 0.8 mg each. Two mg was sufficient for hematological recovery. Better responses were obtained when Vit.B-12 or liver extract was also given.

NUMBER 01595
Da Silva, A.C.
Fajer, A.B.
De Angelis, R.C.
Pontes, m.a.
Giesbrecht, A.M.
The Domestic Cat as a Laboratory Animal for Experimental Nutrition Studies. VII. Pyridoxine Deficiency.
J. Nutr. 68:213,1959
Vitamin B-6 deficiency in cats is characterized by growth failure, emaciation, convulsions, anemia, kidney disease, and iron deposits in the liver.

NUMBER 01596
Da Silva, A.C.
Guerios, M.F.M.
Monsao, S.R.
The Domestic Cat as a Laboratory Animal for Experimental Nutrition Studies. VI. Choline Deficiency.
J. Nutr. 67:537,1959.
Choline deficiency in the cat is characterized by weight loss and fatty liver.

NUMBER 01597
Dickinson, C.D.
Scott, P.P.
Failure to Produce Urinary Calculi in Kittens by the Addition of Mineral Salts Derived from Bone-Meal to the Diet.
Vet.Rec. 68:585,1956.
The authors were unable to produce urinary calculi in kittens fed a diet containing 30% ash.

NUMBER 01598
Dickinson, C.D.
Scott, P.P.
Nutrition of the Cat. 2. Protein Requirements for Growth of Weanling Kittens and Young Cats Maintained on a Mixed Diet.
Brit. J. Nutr. 10:311,1956.
The authors favor a high-fat, high-protein diet for cats.

NUMBER 01599
Everett, G.M.
Observations on the Behavior and Neurophysiology of Acute Thiamine Deficient Cats.
Am. J. Physiol. 641:439,1944.

NUMBER 01600
MacLennan, C.R.

The Behaviour of Receptors of Extramuscular and Muscular Origin With Afferent Fibres Contributing to the Group I and the GroupII of the Cat Tibialis the Group I and the Group II of the Cat Tibialis Anterior Muscle Nerve.
Proc.Physiol.Soc.,p.90-91,1971.
In many muscle nerves, afferent fibres from muscle spindles and tendon organs account for nearly all the sensory fibres of group I and II. Some muscle nerves, however, contain more afferent fibres than would be predicted on the basis of the known numbers of these receptors. In the present experiments, the receptor behaviour and properties of 343 afferent fibres (conduction velocities 22.6 to 108.6 m/sec) from the tibialis anterior muscle nerve was studied. The results show that group I and group II fibres from extramuscular receptors and atypical muscle receptors are present in considerable numbers in the cat tibialis anterior muscle nerve.

NUMBER 01601
Coppin, C.M.L.
Jack, J.J.B.
Internodal Length and Conduction Velocity of Cat Muscle Afferent Nerve Fibres.
Proc.Physiol.Soc. p.91,1971.

NUMBER 01602
Appleby, A.
Toxoplasmosis - The Known and the Unknown.
J.A.V.M.A. 160(3):262,1972.
A "Letter To The Editor" regarding the practitioners' attitude to Toxoplasma gondii in cats and public health.

NUMBER 01603
Barrett, T.W.
Interaural Stimulation: Effects on the Q Value of Tuning Curves and Post-stimulus Time Histograms of Cat Auditory Cortex Neurons.
Exptl.Neurol. 34:484-496,1972.
The results of this study of single neuron activity in area AI of the auditory cortex in the awake cat indicate a "sharpening" of the tuning curve or an increase in the Q value of tuning curves when interaural delays in acoustical stimulation are introduced at the contralateral ear. The shape of poststimulus time (PST) histograms is affected similarly by contralateral delay or attenuation in the acoustical signal. An optimum interaural attenuation or an optimum interaural delay sometimes leads to increased neuronal activity. The shape of the PST histogram sometimes differs markedly between binaural and monaural stimulation. The shape of the PST histogram sometimes differs markedly with interaural delays. With a single sound source, changing the direction of the source around

the head gave varying histogram profiles.

NUMBER 01604
Freudlich, J.J.
Detweiler, D.K.
Hance, H.E.
Indirect Blood Pressure Determination by the Ultrasonic Doppler Technique in Dogs.
Current Therap.Res. 14(2):73-79,1972.

The Arteriosonde, utilizing Doppler ultrasound has been tested on 34 dogs. There was good agreement between indirect readings and direct arterial puncture measurements in eight unanesthetized Greyhounds. Indirect pressures also obtained from four of the unanesthetized Greyhounds over a period of about six months showed initial instability and high variability of readings, but after the initial phase of instability, the variability was decreased and comparable to that obtained in anesthetized animals. Indirect and direct intra-arterial recordings from 26 anesthetized dogs were used as a basis for accuracy and variability determinations. The mean differences with femoral artery were held to +/- 15 mm.Hg or less, when filter switching was used. Correlation data showed adequate following of the drug-induced blood pressure changes, and variability of the data judged by the standard deviation of mean differences and standard error of the linear estimate was within 10 to 15 mm.Hg. Therefore, one can expect results from the indirect Doppler ultrasonic equipment on unanesthetized dogs.

NUMBER 01605
Nelp, W.B.
Denney, J.D.
Murando, R.
Hinn, G.M.
Williams, J.L.
Rudd, T.G.
Palmer, H.E.
Absolute Measurement of Total Body Calcium (Bone Mass) in vivo.
J.Lab.Clin.Med. 79(3):430-438,1972.

Using total body neutron activation analysis (TBNA) and total body counting, a technique has been established to quantitate body calcium in grams with an estimated accuracy of 5.2 per cent (see below). Five cadavers of various body size were activated and counted to establish the ratio of their induced 49Ca activity to a fixed calcium standard, activated and counted under identical conditions. The cadaver skeletons were then ashed and chemically analyzed to establish the specific activity; i.e., the 49Ca activity induced per gram of skeleton calcium. Variations in specific activity between cadavers were linearly related to body weight divided by height (kilogram per meter). The TBNA results from subjects of various sizes measured in vivo could then be converted to grams of calcium using the cadavers as comparison standards. In 8 normal men, total body calcium ranged from 933 to 1,361 Gm., average 1,093 Gm. Data for body calcium from cadaver analyses from the literature plus the present results were inspected. The relationship between skeletal calcium and skeletal length suggests that total body calcium increases as 1/5 the cube of skeletal length. Applying this relationship to normal men measured by TBNA, the expression y=0.203 x(exponent 3) was derived where y = calcium in grams and x = height in meters. In 5 patients with known osteopenia from various causes, bone mass was shown to be reduced 23 to 35 per cent below the expected normal.

NUMBER 01606

McGowan-Sass, B.K.
Eidelberg, E.
Habituation of Somatosensory Evoked Potentials in the Lemniscal System of the Cat.
Electroencephalo.Clin.Neurophysiol. 32:373-381,1972.

Habituation and restoration of somatosensory evoked potentials were demonstrated at multiple selected sites in the lemniscal system of the cat. Potentials were evoked by minimal suprathreshold stimuli delivered at regular intervals to the skin of the forepaw. Evoked responses declined as a function of time in the medial lemniscus, the nucleus ventralis postero-lateralis of the thalamus, the somatosensory cortex, and the pyramidal tract, but responses did not decline in the presynaptic dorsal columns, indicating the importance of the first synaptic relay. We also observed habituation in ventro-basal thalamus to stimulation of dorsal columns and medial lemniscus, and habituation in the somatosensory cortex to stimulation of medial lemniscus and ventro-basal thalamus, although we never observed habituation of the response of the pyramidal tract to stimulation of the cortex. Thus, it seems likely that habituation is characteristic of each nuclear group and not exclusively of any specific ascending or descending pathway. It was also demonstrated that habituation will take place in: (1) subjects anesthetized with a high dosage of alpha chloralose; (2) in the locally anesthetized, curarized preparation; and (3) in subjects with prior dorsal column section. The theoretical implications of these results were discussed.

NUMBER 01607

Anderson, S.A.
Projection of diferent Spinal Pathways to the Second Somatic Sensory Area in Cat.
Acta Physiol.Scand. 56(suppl.194):1-74,1962.

NUMBER 01608

Groves, P.M.
Lee, D.

Thompson, R.F.
Effects of Stimulus Frequency and Intensity on Habituation and Sensitization in Acute Spinal Cat.
Physiol.Behav. 4:383-388,1969.

NUMBER 01609
Kitai, S.T.
Weinberg, J.
Tactile Discrimination Study of the Dorsal Column-Medial Lemniscal System and the Spino-Cervico-Thalamic Tract in the Cat.
Exp.Brain Res. 6:234-246,1968.

NUMBER 01610
Spencer, W.A.
Thompson, R.F.
Neilson, D.R.
Response Decrement of the Flexion Reflex on the Acute Spinal Cat and Transient Restoration by Strong Stimuli.
Neurophysiol. 29:221-240,1966.

NUMBER 01611
Towe, A.L.
Jabbur, S.J.
Cortical Inhibition of Neurons in Dorsal Column Nuclei of Cat.
J.Neurophysiol. 24:488-498,1961.

NUMBER 01612
Wickelgren, W.O.
Effect of Acoustic Habituation on Click-Evoked Responses in Cats.
J.Neurophysiol. 31:777,1968.

NUMBER 01613
Teyler, T.J.
Roemer, R.A.
Thompson, R.F.
Habituation of the Pyramidal Response in Unanesthetized Cat.
Physiol. Behavior 8:201-205,1972.
Evoked pyramidal activity characteristics in unanesthetized cats were studied in relation to the intensity and frequency of repeated somatic stimuli. An early component of the evoked pyramidal activity exhibited habituation while a later component showed sensitization. Both habituating and sensitizing components were affected by stimulus manipulations. The results are consistent with a dual-process theory of habituation.

NUMBER 01614
Chu, N.
Rutledge, L.T.
Multisensory Activation of Pyramidal Tract Neurons in the Cat.
Expl.Neurol. 30:351-361,1971.

NUMBER 01615
Groves, P.M.
DeMarco. R.
Thompson, R.F.
Habituation and Sensitization of Spinal Interneuron Activity in Acute Spinal Cat.
Brain Res. 14:521-525,1969.

NUMBER 01616
O'Brien, J.H.
Fox, S.S.
Single-cell Activity in Cat Motor Cortex. I. Modifications During Classical Conditioning Procedures.
J.Neurophysiol. 32:267-284,1969.

NUMBER 01617
O'Brien, J.H.
Fox, S.S.
Single-Cell Activity in Cat Motor Cortex. II. Functional Characteristics of the Cell Related to Conditioning Changes.
J.Neurophysiol. 32:285-296,1969.

NUMBER 01618
Teyler, T.J.
Roemer, R.A.
Thompson, R.F.
Relations Between Gross and Unit Evoked Activity in Pericruciate Cortex of Cat.
Physiol.Behav. 6:375-379,1971.

NUMBER 01619
Meincke, J.E.
Hobbie, W.V., Jr.
Hardy, W.D.
Lymphoreticular Malignancies in the Cat: Clinical Findings.
J.A.V.M.A 160(8):1093-1099,1972.
One hundred and fifty cases of feline lymphoreticular malignancies were studied over a 12-year period. In one of the contributing hospitals the incidence of lymphoreticular malignancies was 1.6% of all cats examined and 4.7% of cats hospitalized because of clinical illness during a 2-year period. The mean age of all afflicted

cats was 5.5 years; 42% of the malignancies were in cats less than 3 years old. Pedigreed cats (21% of the cases) had a mean age of 3.7 years, significantly less than the mean age of 6.0 years for the domestic cats (79% of the cases). Sex predilection or seasonal prevalence was not observed. Histories were often vague. The signs of illness most commonly encountered were anorexia, lethargy, and weight; however, there was no consistent sign that could be considered characteristic of the disease. Clinical examination revealed abnormal masses or organ enlargement in 53% and pale mucous membranes in 50% of the afflicted cats; only 19% of the cats had enlargement of peripheral lymph nodes. The malignancies were classified by distribution of major gross lesions into one of 4 forms: (1) alimentary, 70 cases; (2) cranial mediastinal, 38 cases; (3) multicentric, 28 cases; and (4) unclassified, 14 cases. The cranial mediastinal form occured most frequently (80%) in cats less than 5 years old, whereas the other forms occurred more often in older cats.

NUMBER 01620
705,709
Nelson, N.S.A
Berman, E.
Rosenstein, L.S.
Ward, J.M.
Wright, J.F.
Bioeffects of Continuous Short-Term Exposure of Felines to Radioactive Strontium: A Preliminary Report.
Biomedical Implications of Radiostrontium Exposure, proc.sympos. at Davis, Calif.,1971, A.E.C. Symposium Series no. 25, 1972.

For a determination of the relative radiosensitivity of cats during different periods of development, weanling and adolescent cats were studied after oral administration of 89Sr for 30 days at one of four dose levels: 100, 50, 25, or 0 microCi of 89Sr per day. In the acute phase, during dosing, all of the cats at 100 microCi/day and 16% at 50 microCi/day died. There were no deaths among the other weanlings or adolescent cats. Some parameters in the hemograms showed early and pronounced graded depression. Segmented neutrophils in weanling cats showed the earliest response: within 7 days at the 100 microCi/day level, 11 days at 50 microCi/day, and 15 days at 25 microCi/day. The adolescents showed similar but less-rapid responses. In the weanling groups, segmented neutrophils reached their minimum values during the dosing period, less than 1% of the sham value for the 100 microCi/day level and 2% for the 50 microCi/day level. The depression of the platelets occurred later but was similar in magnitude. Red-cell parameters showed no significant changes except in terminal stages. By day 150 all irradiated weanlings except two at 25 microCi/day had died, and all but two adolescent cats had survived. Neutrophil recovery was commensurate with the magnitude of the insult. The 100 microCi/day adolescents remained 90% below sham values at the end of the postdose period, while the 25 microCi/day adolescents were within normal ranges. Platelets behaved similarly. Lymphocytes were depressed 20 to 60% from the sham values, but the response was too erratic to be related to the dose level. The red-cell values were depressed by 40% in the 100 microCi/day adolescents at about day 60 after dosing but were within normal range by the end of the observation period. Clinical symptoms were characteristic of the radiation-induced hemorrhagic syndrome, with minor hemorrhages in various tissues. Free bleeding into large body cavities or gross evidence of bleeding from the gastrointestinal tract was not apparent. The bone marrow of cats exposed to the higher dose levels was aplastic. Marrow from cats exposed to lower levels was cellular and composed primarily of erythropoietic cells with few granulocytic cells and megakaryocytes. Myelofibrosis was seen in five cats, and myeloid metaplasia, usually in the lymph nodes, developed in five cats, one case resembling granulocytic leukemia. Ultrastructural studies of bone marrow revealed degenerative changes in mitochondria of plasma cells. Viral particles were not found in the marrow samples of the four cats studied.

NUMBER 01621
Beach, F.A.
A Review of Physiological and Psychological Studies of Sexual Behavior in Mammals.
Physiol.Rev. 27:240-307,1947.

NUMBER 01622
Scott, P.P.
Dietary Requirements of the Cat.
Petfood Industry 14:6,1972.
Since the growth rate and metabolic turnover of the cat does not materially differ from that of similar-sized dogs, it is apparent that the excess protein requirement of cats is utilized for energy production. It is possible that the obligatory diversion of protein for energy was originally developed as a means of dealing with the high protein intake forced upon the cat by its predatory habits. A diet of small animals and birds would give an intake of this approximate composition: 70% water, 14% protein, and 10% fat. On a dry food basis this gives a protein intake of between 40 and 50%. Nutritional research has shown that the diet of growing kittens should contain about 33% protein of high biological value in a mixed diet, and for adults, more than 21%. The quality of the protein eaten, that is, its biological value, is important to the cat, especially for growth. Proteins derived from connective tissue do not support growth satisfactorily unless supplemented by amino acids to

improve the biological value of the diet. Probably the best method of assessing the value of food materials intended for cat diets is to determine the protein efficiency ratio in growing kittens; that is, weight gained in grams divided by the grams of protein consumed over a given period.

NUMBER 01623

Romand, R.
(Maturation of the Cochlear Potentials During the Perinatal Period of the Cat and Guinea Pig.)
J.Physiologie 63(8):763-782,1972.

This work was carried out on the kitten and the foetus of the guinea pig with a view to following the evolution of the cochlear microphonic and the cochlear nerve action potential from birth until adult characteristics are acquired. In the cat the cochlear microphonic is always detectable from birth. Its threshold is relatively high and adult characteristics appear towards the second week after birth. As for the cochlear nerve action potential, it is not detectable until a few hours after birth. The threshold is considerably higher and it can only be obtained for limited frequencies. The action potential does not acquire its final characteristics until towards the end of the first month after birth. In the foetus of the guinea pig the cochlear microphonic was recorded from the seventh week of gestation. The threshold is relatively high from the beginning and adult characteristics are acquired 10 days later. The cochlear nerve action potential appears about 24 hours after the first signs of the cochlear microphonic and for a greater intensity. The final properties of this potential are not acquired until a few days after birth. A confrontation of these results reveals a clear time lag in favour of the cochlear microphonic compared with the cochlear nerve action potential as far as the respective dates of appearance of these phenomena are concerned, as well as a distinct difference between their stages of maturation. Furthermore anatomofunctional correlations can be made between the development of the limbus spiralis and the tectorial membrane on one hand and that of the cochlear microphonic on the other.

NUMBER 01624

Marty, R.
Thomas, J.
(Electro-cortical Response to the Cochlear Nerve Stimulation in the Neonatal Cat.)
J.Physiol.(Paris) 55:165-166,1963.

NUMBER 01625

Romand, R.
Pujol, R.
Konig, N.

Marty, R.
(Electrophysiologic Maturation of the Cochlea of the Cat.)
C.R.Acad.Sci.Paris 270:2476-2479,1970.

NUMBER 01626
Rose, J.E.
Adrian, H.
Santibanez, G.
Electrical Signs of Maturation in the Auditory System of the Kitten.
Acta Neurol.Lat.-Amer. 3:133-143,1957.

NUMBER 01627
Prentiss, P.G.
Wolf, A.V.
Eddy, H.A.
Hydropenia in Cat and Dog: Ability of the Cat to Meet its Water Requirements Solely From a Diet of Fish or Meat.
Am.J.Physiol. 196(3):626-632,1959.
The physiology of hydropenia was studied in cat and dogs placed on 3 regims: 1.no water, no food; 2.water ad libitum, no food; 3.no water, food. Animals deprived of water and food showed elevations in plasma sodium, chloride, osmotic pressure and total solids, with progressive hydropenia. Tap water ad libitum prevents these changes in fasting and promotes slight decreases in plasma osmotic pressure. It also sustains life well beyond the period endured by animals with no access to fluid. That cats with no drinking fluid are able to maintain themselves well for long or indefinite periods on diets of cod, salmon and beefsteak, and are unable to do so on partly dessicated salmon and beef, is generally predictable by metabolic calculations and confirmed by measurements. The significance of these facts for the water metabolism of marine mammals which may not drink is broached.

NUMBER 01628
Wolf, A.V.
Prentiss, P.G.
Douglas, L.G.
Swett, R.J.
Potability of Sea Water With Special Reference to the Cat.
Am.J.Physiol. 196(3):633-641,1959.
Under certain conditions in which food provides an adequate caloric intake but too little water to sustain a cat or rat in euhydration, these animals can be shown to depend for survival on their intake of sea water. They will generally drink enough sea water ad libitum to thrive, even overcoming therby a previously induced water deficity; or, they will readily eat their food, mixed with sea water in amounts which can vary widely, with similar benefit. With

out sea water they undergo progressive hydropenia and die. Along with experimental verification of the potability of sea water a theory of sea water drinking (mariposia) is presented, based upon the concept of urinary osmotic space.

NUMBER 01629

Herron, M.A.
The Effect of Prepubertal Castration on the Penile Urethra in the Cat.
J.A.V.M.A. 160(2):208-211,1972.

The effect of early castration on the urethra and the periurethral tissues of 30 male cats was evaluated histologically. The cats were allotted to 3 groups of 10 each - control cats (sexually intact), prepubertally castrated cats, and prepubertally castrated cats subsequently treated with testosterone. The intact cats had significantly higher urethral epithelium and a lower fibrocyte density than did the castrated cats. Neither castration nor castration with subsequent testosterone treatment affected urethral circumference. Testosterone, at the amounts administered in this study, was not responsible for any of the observed histologic differences.

NUMBER 01630

Schein, H.W.
Anuria and Dysuria in the Male Cat.
Vet.Med. 46:372,1951.

NUMBER 01631

Scott, M.G.
Scott, P.P.
Post-Natal Development of the Testis and Epididymis in the Cat.
J.Physiol. 136:40-41,1957.

NUMBER 01632

Nott, M.W.
Raper, C.
Use of Cumulative Dose-Response Curves in Potency Comparisons of Sympathomimetic Amines on the Cat Soleus Muscle.
Brit.J.Pharmacol. 44(3):589-591,1972.

The ability of beta-adrenoceptor agonists to reduce the fusion of incomplete tetanic contractions of the soleus muscle of the cat has been used previously as a model to assess the potential tremor producing effect of sympathomimetic bronchodilators. The ability of (-)-isoprenaline, (-)-adrenaline, (+/-)-soterenol and (+/-)-quinterenol to depress incomplete tetanic contractions of the soleus has now been assessed using cumulative administration of the amines. The method quickly produced accurate and reproducible dose-response

curves. It is particularly useful for evaluating the
potency of long-acting compounds.

NUMBER 01633
Bowman, W.C.
Nott, M.W.
Actions of Some Sympathomimetic Bronchodilator and
Beta-Adrenoreceptor Blocking Drugs on Contractions of
Cat Soleus Muscle.
Brit.J.Pharmacol. 38:37-49,1970.

NUMBER 01634
Bowman, W.C.
Zaimis, E.
The Effects of Adrenaline, Noradrenaline and
Isoprenaline on Skeletal Muscle Contractions in the
Cat.
J.Physiol., London 144:92-107,1958.

NUMBER 01635
Awa, A.
Sasaki, M.
Takayama, S.
An In Vitro Study of the Somatic Chromosomes in
Several Mammals.
Jap.J.Zool. 12:257-265,19?.
The somatic chromosomes of the guinea pig Cavia
Cobaya, the golden hamster Mesocricetus Auratus, the
clawed jird Meriones Unguiculatus Unguiculatus
Milne-Edwards, the dog Canis Familiaris, and the cat
Felis Domestica were investigated in cells of tissue
culture by the application of a water pre-treatment
method. Particular attention was directed to the number,
relative size and shape of the individual chromosomes, the
location of the centromeric regions in metaphase
chromosomes, and the sex-elements. The somatic number of
chromosomes established was 64 for the guinea pig, 44 for
the golden hamster, 44 for the clawed jird, 78 for the dog,
and 38 for the cat. Ideogram analysis were made with
considerable accuracy in each species. The problems of
inconstancy of the somatic chromosomes in vitro and in vivo
were not touched upon in this paper.

NUMBER 01636
Ishihara, T.
Cytological Studies on the Tortoiseshell Cat.
Cytologia 21:391-398,1956.

NUMBER 01637
Koller, P.C.
The Genetical and Mechanical Properties of
Sex-Chromosomes, VIII. The Cat (Felis

Domestica).
Proc.Roy.Soc.Edinburgh, B61,1941.
The cat has 38 chromosomes.

NUMBER 01638
Makino, S.
Tateishi, S.
A Comparison of the Chromosomes in the Lion, Chinese Leopard Cat and House Cat.
J.Morphol. 90:93-102,1952.
These 3 cats have 38 chromosomes.

NUMBER 01639
Minouchi, O.
Ohta, H.
On the Chromosome Number and the Sex Chromosomes in the Germ Cells of the Male and Female Cat.
Cytologia 5:355-362,1934.
The cat has 38 chromosomes.

NUMBER 01640
De Winiwarter, H.
Saintmont, G.
Nouvelle Recherches sur L'ovogenese et L'organogenese de L'ovaire de Mammifere (Chat). IV.
Arch.Biol. 24:165-276,1909.
The authors indicated that ovulation in the cat is normally induced by copulation.

NUMBER 01641
Clark, L.
Seawright, A.A.
Gartner, R.J.W.
Longbone Abnormalities in Kittens Following Vitamin A Administration.
J.Comp.Path. 80:113-121,1970.
High levels of vitamin A were administered daily to 8 kittens for 4 or 5 weeks after weaning, and they were destroyed after a further 6 to 15 weeks. At necropsy, most of the long bones were considerably shorter than those of litter mate controls and some showed abnormal morphology due to an altered growth pattern in the post-dosage period. Histopathologically there was variable damage to epiphyseal growth plates and in some long bones no remnant of an epiphyseal plate remained.

NUMBER 01642
Kyzar, J.R.
Chester, D.K.
Hightower, D.
Comparison of T-3, T-4 Tests and Radioactive Iodine Uptake Determinations in the Dog.

Vet.Med./Small Anim.Clin. 67(3):321-322,1972.
T-3 uptake tests, T-4 and radioactive iodine (Iodine-131) uptakes were performed on 20 clinically hypothyroid and 6 euthyroid dogs to compare the relative value of these tests in diagnosing hypothyroidism. The T-4 and Iodine-131 uptake tests were found to be in agreement as to the functional status of the thyroid gland. The T-3 uptake test was found to be less sensitive than either the T-4 test or the Iodine-131 uptake test in evaluating hypothyroidism.

NUMBER 01643
Bisti, S.
Maffei, L.
Piccolino, M.
Variations of the Visual Responses of the Superior Colliculus in Relation to Body Roll.
Science 175(4020):456-457,1971.
A large percentage of the directional units of the superior colliculus of the curalized cat modify their response to a particular moving visual stimulus as a function of the position of rotation of the animal about its longitudinal axis.

NUMBER 01644
Noda, H.
Freeman, R.B., Jr.
Creutzfeldt, O.D.
Neuronal Correlates of Eye Movements in the Visual Cortex of the Cat.
Science 175(4022):661-662,1972.
About 10 percent of the cells in the visual cortex of awake cats do not respond to stationary parallel stripes in any orientation or to stripes moving across the visual field in any direction at a moderate speed (up to 132 degrees per second), but these cells are either excited or inhibited during saccadic eye movements when the animal faces a patterned visual environment. Of nineteen such cells tested in total darkness, seven discharged in association with eye movements. For saccade-related discharges, the latency during retinal stimulation is typically shorter than the latency in total darkness.

NUMBER 01645
Teyler, T.J.
Shaw, C.
Thompson, R.F.
Unit Responses to Moving Visual Stimuli in the Motor Cortex of the Cat.
Science 176:811-813,1972.
Neurons in the pericruciate cortex of the cat were tested with moving visual stimuli for responses to specific properties of the visual receptive field. Specific response patterns were shown by cells of origin of the

pyramidal tract as well as by other cells.

NUMBER 01646
Marchand,?.
Beitrage zur Kenntis der Placentarbildung. Die
Placenta des Kaninchens mit
Bemerkungen uber die Placenta der Katze.
Schriften d.Gesellsch. z.Beforderung d.ges.
Naturwiss. zu. Marburg 13(3):45,1898.

NUMBER 01647
Opitz, ?.
Vergleich der Placentarbildung bei Meerschweinchen,
Kaninchen und Katze mit Derjenigen beim
Menschen.
Zeitschr.f.Geb.u.Gyn. 41,1899.

NUMBER 01648
Melisenos, ?.
Uber die Fettkornchen und ihre Bedeutung in der
Placenta bei den Nagern und der Katze.
Arch.f.Mikr.Anatomie. 67,1906.

NUMBER 01649
Dille, J.M.
title unknown.
J.Pharm.Exp.Ther. 52:129,1934.
Studies on transplacental activity of barbiturates in cat,
guinea pig and rabbit.

NUMBER 01650
Landauer, W.
Hybridization Between Animals and Man as a Cause of
Congenital Malformations.
Arch.Anat.(Strasb.) 44(Supp.):153-164,1961.
Includes a report that, in the 17th Cent., a young
Danish woman was prosecuted for having borne a child with
the head of a cat, presumable an anencephalic child.

NUMBER 01651
Exley, S.H.
Nutrition of the Cat.
J.A.V.M.A. 132:538-539,1958.
Little experimental work has been done on the dietary
requirements of the cat, and much of what has been done is
inconclusive.

NUMBER 01652
Allison, J.B.
Miller, S.A.

McCoy, R.
Brush, M.K.
Studies on the Nutrition of the cat.
Young cats require about 160 calories per kilogram of weight, about twice that of adults.

NUMBER 01653
Dickinson, C.D.
Scott, P.P.
Preliminary Observations on the Protein Requirements of Kittens Receiving a Mixed Diet.
J.Physiol. 129:78-79,1955.
A mixed diet containing 30 per cent protein or less was inadequate for proper growth and development.

NUMBER 01654
Coffin, D.L.
Holzworth, J.
"Yellow Fat" in Two Laboratory Cats: Acid-Fast Pigmentation Associated with a Fish-Base Ration.
Cornell Vet. 44:63-71,1954.
The diets were found to be low in Vitamin E.

NUMBER 01655
Hegsted, M.D.
Gershoff, S.M.
Lentini, E.
The Recent Development of Palatability Tests for Cats.
Am.J.Vet.Res. 17:733-737,1956.
Palatability tests for cats are described. Note is made of a number of factors which must be considered in such tests. Some foods of high acceptability were found to be nutritionally inadequate when used over long periods.

NUMBER 01656
Morris, M.L.
Nutritive Requirements of the Cat: A Preliminary Report.
Vet.Med. 48,451-456,1953.
Niacin is an essential component of the diet.

NUMBER 01657
Morris, M.L.
Nutritive Requirements of the Cat. II.
North Amer.Vet. 36:468-471,1955.
Vitamin C does not seem to be required in the diet. In the normal healthy cat, it is apparently synthesized in the body.

NUMBER 01658
Morris, M.L.
Nutritive Requirements of the Cat. II.
Vet.Med. 49:85-86,1954.
Indications are that Vitamin A is a dietary essential.

NUMBER 01659
Morris, M.L.
Recent Developments in Nutritional Research.
J.A.V.M.A. 111:509-512,1947.

NUMBER 01660
Stansbury, R.L.
Truesdail, R.W.
Occurrence of Vesical Calculi in Cats Receiving Different Diets.
North Amer.Vet. 36:841-845,1955.
Feeding 50 cats for 33 months on a canned fish diet seemed to produce no tendency toward the formation of vesicular calculi.

NUMBER 01661
605,608,609
Short, D.J.
Lamotte, J.
The Establishment of an Experimental Cat Colony.
J.Anim.Tech.Assoc. 9:3-6,1958.
Includes the early experiences of the Mill Hill, England cat colony. Housing, feeding, reproduction statistics and some disease problems are described. Also, a weight curve to 26 weeks of age is given.

NUMBER 01662
Scott, P.P.
Lloyd-Jacob, M.A.
Some Interesting Features in the Reproductive Cycle of the Cat.
Studies on Fertility 7:123-129,1955.

NUMBER 01663
Johnston, C.D.
Hazelton, L.W.
Normal
Blood Cholinesterase Activity in Several Animal Species, Including Domestic Fowls.
Pharm.Expt.Therap. (Fed.Proc.) 14:355,1955.
Made in connection with toxicity studies on anti-cholinesterase type insecticides, the following are data of
normal values (microliters/ml blood of plasma/min) of cholinesterase:
cow, 44.8; calf, 39.3; dog

(Rbc), 12.7; dog (plasma), 36.9; rat (Rbc), 8.5; rat (plasma), 45.6; duck, 22.8; goose, 13.1; turkey, 41.2; cat (plasma, acetylcholin substrate), 19.9; cat (plasma, butyrylcholine substrate), 37.2.

NUMBER 01664

Carlos, E.R.
Kundin, W.D.
Watten, R.H.
Tsai, C.C.
Irving, G.S.
Carlos, E.T.
Directo, A.C.
Leptospirosis in the Philipines: Feline Studies.
Am.J.Vet.Res. 32(9):1455-1456,1971.

Bacterial isolation attempts on 8 febrile and icteric domesticated cats in the Philipines yielded one leptospiral isolate, L. grippotyphosa, from a urine sample. Results of microscopic agglutination tests of serum samples from the cats were negative except for the samples from the cat from which the urinary isolate was obtained; the latter gave a monospecific reaction against L. grippotyphosa.

NUMBER 01665

Waterhouse, R.
Report of the Committee of Inquiry on Rabies: Final Report.
Her Majesty's Stationery Office, London, 1971.

A survey is given of the history and present status of the disease in the U.K. and other European countries, its epidemiology, its danger to animals and man, and recommended diagnostic and treatment procedures. The present system of importation and quarantine of susceptible animals is described, and recommendations on the handling, transportation and care of such animals occupy most of the report. These include details of suitable crates for transport, the facilities required for isolation at approved points of entry and at quarantine establishments, the necessity of having a supervising veterinary officer at such premises, the restriction on access to unauthorized persons, and the maintenance of detailed case histories. It is strongly recommended that the duration of quarantine for imported animals should not be shortened. The procedure to be followed when the disease is suspected is outlined for both the affected animal and for possible human and animal contacts. The widespread presence of the disease in wildlife, particularly foxes, in countries from which animals are imported is a cause for serious concern. Control measures are suggested.

NUMBER 01666

Rahal, F.
(Epidemiolog and Prophylaxis of Rabies in Algeria.)

Thesis, Ecole Nationale Veterinaire Lyon, 1970.
Rabies in Algeria appears to have a cyclic incidence. The last major outbreak occurred in 1964-1966, and this was followed by a slow regression. The disease is now spreading again throughout the country. The reservoirs of the virus are wild carnivora, especially the jackal, and the vectors are the innumerable stray dogs which spread the infection to other dogs, cats, herbivora and man. About 20 cases of human infection occur yearly. The present outbreak is attributed to the failure to apply control measures, owing to economic and administrative difficulties.

NUMBER 01667
El-Ahwal, A.M.
Rabies Problem and Eradication in U.A.R.
J.Egypt.Vet.Med.Assoc. 29(3/4):121-129,1969.
In Egypt the number of persons seeking antirabic treatment is increasing year by year. The mortality in human population exposed to infections was put at 0.13%. During the year 1965, dogs were responsibile for biting 81% of the human beings bitten, cats 7.5%, wolves 0.5%, foxes 0.07%, camels 2.5%, horses 4.5% and other animals 3.5%. The distribution of rabies in various species of animals between 1953 and 1958 was: dogs 75.8%, cats 14.5%, wolves 3%, solipeds 5%, ruminants 1%, rodents 0.3%, and monkeys 0.3%. A rabies eradication programme was proposed.

NUMBER 01668
Schaaf, J.
Schaal, E.
(Diagnostic Value of the Cornea Test, the Nose Test and the Mouth Test for Diagnosin Rabies When Carried-out on Rabies-Positive Post-Mortem Material.)
Deutsche Tierarzt.Wochensch. 78(12):341-346,1971.
Tests were carried out on 81 foxes, 5 sheep, 4 deer, 4 cats, 3 martens, a dog, a cow and a horse. The cornea test, which is reliable in the living patient, was unreliable in deteriorated material. Immunofluorescent examination of the nasal mucosa was not as effective as the corneal test, but demonstrated the establishment and multiplication of virus in the nasal mucosa. The mouth test was difficult and unreliable.

NUMBER 01669
Peterman, H.G.
Soulebot, J.-P.
Land, R.
Branche, R.
(Vaccination Against Rabies of Carnivores and Herbivores with an Inactivated Vaccine Produced in Tissue Culture.)

Bull.Soc.Sci.Vet.Med.Comp.Lyon 73(2):123-140,1971.
An efficient rabies vaccine has been prepared with fixed virus grown on cultured cells, NIL 2, of young hamsters. Titres of 10(to 7.5 power) - 10(to 8.2 power) mouse LD-50 per ml were obtained. The vaccine is inactivated by a combination of heat and propiolactone, and can be kept in either liquid or freeze-dried form. The latter is used mainly in cats, dogs and blood horses. Vaccines containing aluminium hydroxide, saponin or oily adjuvants are especially suitable for cattle. Vaccinated dogs resisted challenge with street virus 20 months after vaccination. The vaccine remains efficient under severe climatic conditions and after long storage.

NUMBER 01670
Shashen'ko, A.S.
Kovalef, N.A.
(Distribution of Rabies Virus in the Body and its Isolation.)
Veterinariya (Moscow)
5:42-44,1971.
The tissue distribution and shedding of rabies virus was studied in sheep, cattle, dogs, foxes and cats inoculated experimentally with street virus isolated from a steer bitten by a rabid fox. Virological examination revealed that virus was present not only in the brain and salivary glands but also in the cornea, mediastinal lymph nodes, spleen and pancreas. Viraemic virus was detected in all infected animal species during pyrexia observed prior to the appearance of clinical signs of the disease. In paralysed animals and after death viraemic virus was absent. Saliva contained virus 1 to 3 days before the appearance of clinical signs, being inefective during the whole period of the disease. Virus was not discovered in the urine or milk. In dogs and foxes inoculated with rabies virus there were some abortive cases of rabies, with clinical recovery and the shedding of virus in saliva by recovered animals for a period up to 1 month.

NUMBER 01671
Tan, R.J.S.
Miles, J.A.R.
Further Studies of Feline Respiratory Virus Diseases. I.
(Vaccination Experiments) and II. (Immunodiffusion Tests).
New Zealand Vet.J. 19(1-2):12-15,1971.
Herpesvirus strains from field cases were grown on kitten kidney tissue culture. An attenuated live vaccine, produced by passaging the virus seven times, was given intranasally (7 animals) and i/m (2 animals), and as inactivated dead vaccine (formalised purified tissue culture preparation) was given i/m (20 animals). Vaccine was given as two doses 3 weeks apart, followed in 3 weeks

by an intranasal challenge of virulent virus. Intranasal live vaccine produced mild disease at both doses, and afforded poor protection, whereas the inactivated vaccine had only slight side-effects and gave good protection. All eleven control animals contracted the disease. In a limited field trial with the inactivated vaccine, involving three catteries, disease only occurred in control animals. Immunodiffusion tests were successfully applied to the purified tissue culture virus, using a 1.2% agar base with 0.85% sodium chloride and azide preservative. Two lines were visible, the second faint line representing a non-specific anti-feline antibody associated with guinea-pig antiserum. Results correlated well with those from previous CF and serum neutralising tests.

NUMBER 01672

Keymer, I.F.
Blood Protozoa of Wild Carnivores in Central Africa.
J.Zool. 164(4):513-528,1971.

Nuttallia garnhami is described from Genetta tigrina, a Hepatozoon sp. from G. rubiginosa and G. tigrina, and a Hepatozoon sp. from Panthera (Panthera) pardus. The gametocytes of the last were indistinguishable from H. canis of the dog. Examination of the blood of village dogs in the Luanga Valley, Zambia, is suggested. There was no evidence that any of the parasites were pathogenic.

NUMBER 01673

Hofliger, H.
(Congenital Unilateral Renal Agenesis in Domestic Animals. II. Occurrence in Various Animal Speicies.)
Scheizer Archiv.f.Tierheilkunde 113(6):334-337,1971.

A search of the literature revealed 39 reported cases in cattle, 5 in sheep, 2 in goats, 90 in pigs, 12 in horses, 46 in dogs, 21 in cats and 8 in rabbits. Of the 46 cases in dogs, 15 were in Beagles. Compensatory enlargement of the solitary kidney was commonest in the pig, but also occurred in most affected cattle, dogs and cats. Other anomalies accompanied the condition, particularly defects of the genital tract. The condition has also been reported in mink, g.pig, rat, mouse, fowl and pigeon.

NUMBER 01674

Edel'stejn, I.A.
Valincus, Y.L.
(Morphological Changes in the Sensory Nerve Endings in the Intestinal Walls of Cats in Intoxication by Ascarids. II. Cysteine as an Inhibitor of the Changes in the Receptor Endings in the Intestines Due to Ascarid Toxins.)

Materialy Nauchnoi Konferensii Vsesoyuznogo
Obshchestva Gel'mintologov (Moscow) 2:379-383,1969.
The activities of the adult worms irritate the intestine and the authors believed that the pathogenic effects (including degeneration of neurons in intestinal ganglia) were chiefly due to toxaemia from the adsorption of the products of dead and living ascarids. 10 healthy adult cats were each given daily by mouth for 27 to 35 days extracts prepared from whole Ascaris suum. Some of the cats received also cysteine (25 to 50 mg per kg body weight) given 30 min. before or 30 min. after the administration of Ascaris extracts. All cats were killed and examined histologically. Degenerative changes in the intestinal ganglia (degeneration, fragmentation and argentophilia of neurons) were observed only in cats not treated with cysteine. Hence cysteine treatment prevented degenerative changes in the afferent nerves of the intestine.

NUMBER 01675
Unknown.
Multiple Congenital Cardiovascular Anomalies in a Kitten.
J.A.V.M.A. 160(10):1430-1431,1972.
Patent ductus arteriosus, interatrial septal defect interventricular septal defect, and absence of the aortic and pulmonary valves were developmental anomalies observed in the heart of a 7-week-old Persian kitten at necropsy. In addition, the main pulmonary artery and the aorta originated from the wall of the right atrium.

NUMBER 01676
Tashjian, R.J.
Pensinger, R.R.
Das, K.M.
Reid, C.F.
Crescenzi, A.A.
Feline Cardiovascular Studies: A Preliminary Report.
J.A.V.M.A. Scientific Proc., 100th Ann. Meet., p.112-123,1963.

NUMBER 01677
Whitney, W.H.
What's Your Diagnosis: Radiopaque Foreign Body in the Distal Trachea.
J.A.V.M.A. 160(10):1433-1434,1972.

NUMBER 01678
Lund, J.E.
Avolt, M.D.
Erythrocyte Aplasia in a Dog.
J.A.V.M.A. 160(11):1500-1503,1972.

A 3-year-old Doberman Pinscher had anemia of 1-month's duration. Erythrocytic aplasia was diagnosed, based on the absence of normoblasts in bone marrow smears, markedly delayed serum iron clearance, and low iron incorporation into red blood cells. The white blood cell and platelet counts were within normal range. The dog responded to infusion of plasma from a dog with anemia induced by bleeding. The dog developed clinical signs of hepatic cirrhosis 5 months later and was euthanized.

NUMBER 01679

Priester, W.A.
Congenital Ocular Defects in Cattle, Horses, Cats and Dogs.
J.A.V.M.A. 160(11):1504-1511,1972.

There were 673 diagnoses of congenital ocular defects among 131,453 horses, cattle, cats and dogs brought to 10 veterinary school clinics in the U.S. and Canada during the period March, 1964, to January, 1969. The most frequent defects were: ectasia syndrome, entropion, cataract, microphthalmos-anophthalmos, opacity of cornea, lacrimal anomalies, dermoid cyst, persistent pupillary membrane, and ectropion, in descending order of frquency. The relative frequency of defects in dogs was 6 times that for any other species. Certain breeds were at high risk for specific defects. There was no sex predisposition for any of the ocular defects studied. The total number of each species which comprise this report are not given. For the cat, the following summarizes the tables: 22 total defects seen; 2 anophthalmos-microphthalmos; 2 hydrophthalmos or infantile glaucoma; 1 heterochromia; 1 retinal detachment; 1 unpigmented retina; 1 retinal defect not otherwise specified; 2 cataract; 1 persistent pupillary membrane; 1 lack of eyelid; 1 entropion; 1 defect of membrana nictitans; 4 conjunctival adhesions; 2 defect of lacrimal system; 2 defect of eyelid, not otherwise specified. The breeds involved were: 3 Persian, 3 Siamese, 14 Domestic short-hair, and 2 other species. In female domestic shorthair cats, heterochromia was associated with congenital cerebellar hypoplasia and congenital deafness.

NUMBER 01680

Tan, J.S.
Markham, J.G.
Feline T-Strain Mycoplasmas.
Jap.J.Exp.Med. 41(3):247-248,1971.

T-strain mycoplasms were isolated from the oropharyngeal region of 14 clinically normal cats, using cotton wool swabs, T-strain broth and T-strain agar. None of the feline isolates were inhibited by human T-strain antiserum.

NUMBER 01681
Tan, R.J.S.
Markham, J.
Isolation of Mycoplasma from Cats With Conjunctivitis.
New Zealand Vet.J. 19(1-2):28,1971.
Ocular swabs from clinical cases of conjunctivitis yielded irregular-shaped Mycoplasma colonies, morphologically distinct from isolates from the pharynx of healthy cats. Concurrent examinations for pathogenic bacteria (on blood agar) and viruses (in kitten kidney tissue culture) were negative. Mycoplasma seemed to be an additional agent in the respiratory complex.

NUMBER 01682
Duenwald, J.C.
Holland, J.M.
Gorham, J.R.
Ott, R.L.
Feline Panleukopenia: Experimental Cerebellar Hypoplasia Produced in Neonatal Ferrets With Live Virus Vaccine.
Res.Vet.Sci. 12(4):394-396,1971.
Severe cerebellar hypoplasia was produced in 1- and 2-day-old ferrets by the i/p injection of modified live virus feline panleucopenia vaccine. Three-day-old ferrets given similar injections showed no clinical or pathological changes. No adverse effect was noted in either the female ferret or her newborn after i/p injection of the vaccine at varying intervals during the gestation period.

NUMBER 01683
Love, D.N.
Feline Herpesvirus Associated With Interstitial Pneumonia in a Kitten.
Vet.Rec. 89(7):178-181,1971.
During an outbreak of herpesvirus infection in a cat-breeding colony, a litter of three kittens was born to a female exhibiting signs of an upper respiratory tract infection. Herpesvirus was isolated from the female before and after she gave birth to the litter. Three kittens subsequently died. A herpesvirus was isolated from two of the kittens prior to death and a detailed post-mortem was conducted on one. The major histological findings were tracheitis, bronchitis, bronchiolitis and interstitial pneumonia. Intranuclear inclusion bodies were seen in cells of the trachia, bronchioles and alveoli. Herpesvirus was isolated from pharyngeal swabs and lung suspensions at post mortem examination.

NUMBER 01684
Johnson, R.P.
Sabine, M.
The Isolation of Herpesvirus From Skin Ulcers in Domestic Cats.

Vet.Rec. 89(13):360-362,1971.
Three cats developed extensive skin ulceration after ovariectomy. Ulceration did not respond to antibiotic therapy. Typical herpesviruses were isolated from mouth and skin ulcers.

NUMBER 01685
Zaman, V.
Bohnsale, N.B.
In Vitro Culture of Toxoplasma Infected Cat Intestine.
Experientia 27(8):974-976,1971.
A segment of intestine taken from an infected cat was first treated with antibiotics to remove bacteria, and then slipped onto a glass rod which was immersed in culture medium. Large numbers of merozoites were harvested after three days of culture. This technique may be applicable to the coccidia.

NUMBER 01686
Wallace, G.D.
Isolation of Toxoplasma Gondi From the Feces of Naturally Infected Cats.
J.Infect.Dis. 124(2):227-228,1971.
Stray or unwanted cats on the island of Oahu, Hawaii were examined. Oocysts, proven to be Toxoplasma by inoculation of mice, were found in the faeces of six of 1023 cats. Antibody to Toxoplasma was found by the dye test in the serum of 20% of 522 of the cats tested. Of 202 young cats (under six months of age), only 7% had antibody, whereas it was present in 29% of 320 older cats.

NUMBER 01687
Herrick, J.B.
Ad Libitum.
Vet.Med./Small Anim.Clin. 67(6):597,1972.
Severe pruritus can often be stopped overnight by administering 1% trypan blue at a dosage level of 0.3 to 0.5 cc./bodyweight. To eliminate the side effect of vomiting in dogs and cats, give atropine to dogs, thorazine to cats. Temperature elevation may be noted within a week, but will readily respond to antibiotics. The method by which trypan blue exerts its therapeutic effect is not known, but it is likely related to the microcirculation in the skin. Note: The "death look" in a white dog following treatment may be objectionable.

NUMBER 01688
Percy, D.H.
Jortner, B.S.
Feline Lipidosis.
Arch.Path. 92(2):136-144,1971.
Lipidosis in a 5-month-old domestic cat was accompanied by

cytoplasmic vacuolation of nerve cell bodies in the central nervous system, retina, and ganglia. Similar vacuolation was observed in cells of the reticuloendothelial system of the liver, spleen, and lymph nodes. The nature of this material was not determined by histochemical staining, but biochemical studies revealed an increase in sphingomyelin in affected tissues. Lamellar, membranous cytoplasmic inclusions were demonstrated in neurons & splenic cells by electron microscopy.

NUMBER 01689
Doherty, M.J.
Ocular Manifestations of Feline Infectious Peritonitis.
J.A.V.M.A. 159(4):417-424,1971.

Bilateral endogenous granulomatous uveitis ascribed to feline infectious peritonitis was diagnosed in three cats. Ocular signs included mild corneal oedema, numerous keratic precipitates, aqueous flare with cells, iridocyclitis, exudative choroiditis, and retinitis accompanied by retinal detachment in the eyes having more severe choroiditis and optic neuritis.

NUMBER 01690
Oshiro, L.S.
Riggs, J.L.
Taylor, D.O.N.
Lennette, E.H.
Huebner, R.J.
Ferritin-Labeled Antibody Studies of Feline C-Type Particles.
Cancer Res. 31(8):1100-1110,1971.

The application of an indirect ferritin-labelled antibody method to tissue culture lines established from cats suffering from various malignant diseases revealed tagging of viruses and of certain areas of the cell surface membranes. Dog antifeline sarcoma and cat antifeline sarcoma sera were used as the intermediate sera on feline C-type virus-positive lines established from three cases of malignant lymphoma, one erythroleukemia, and one idiopathic agranulocytosis. The tagging of viruses and membranes was similar in all the lines, indicating a similarity or sharing of antigenic components. Each instance of ferritin-labelled antibody tagging previously had been shown to be positive with fluorescent antibody staining, showing that there was correlation between flourescent antibody staining of feline C-type virus-producing cells and ferritin tagging of the virus and infection-mediated membrane antigens.

NUMBER 01691
Dolley, K.L.
Zimmerman, H.E., Jr.
Mercer, H.D.

Effect of Oxalic and Malonic Acids on the Clotting Mechanism of Dogs.
J.A.V.M.A. 158(3):346-348,1971.
Neither oxalic acid nor malonic acid had any haemostatic action, as measured by the coagulation time and the prothrombin time, following i/v or i/m injection into conscious or anaesthetized dogs.

NUMBER 01692
Hoeppner, G.L.
Short, C.E.
Ketamine: a New Anesthetic for Cats.
Southwestern Vet. 24(3):175-182,1971.
Ketamine (Vetalar) was used in 77 cats in the following doses (mg/lb body wt): 5-10 for restraint, 10-15 for light anaesthesia and 15-25.7 for deep anaesthesia. After intravenous injection, recumbency lasted for an average of 3 min., loss of head-righting reflex 4 min., return of head-righting reflex 1.3 hours. Cats were able to stand unassisted after 2.7 hours and returned to normal after 13.5 hours. An excellent or good anaesthesia was produced in most of the cats. Adverse effects (noted in 23% cats) were tachycardia in 6%, hypothermia & shivering in 4%, salivation in 8%; tonic convulusions, bradycardia and excitement, each in 1%. The drug appeared to be a rapid, safe and satisfactory agent for short diagnostic and surgical procedures.

NUMBER 01693
Kayanja, F.I.B.
The Blood Supply to the Lumbar Vertebrae of the Cat.
Zentralblatt f.Veterinarmed. 18A(3):219-224,1971.
Examination of 45 kittens and cats showed that the lumbar vertebrae are mainly supplied by the rami spinales of the arteria lumbalis. The development and ramification of arterial branches to the various portions of the lumbar vertebrae are described together with the venous drainage. The importance of the vertebral blood supply and its relationship to the readily mobilisable calcium depot in the substantia spongiosa are discussed.

NUMBER 01694
Boyd, J.S.
The Radiographic Identification of the Various Stages of Pregnancy in the Domestic Cat.
J.Small Anim.Pract. 12(9):501-506,1971.
Using the crown-rump length measurement to assess foetal age, a method of estimating the various stages of pregnancy in cats using radiography was produced. It was seen that, although uterine enlargement and displacement was seen as early as the 25th day, the first signs of the foetal skeletal system were not apparent in utero until the 38th day. From this time a progressive pattern of appearance of ossified parts was noted which allowed a means of

estimating the day of gestation.

NUMBER 01695

Baker, H.J.
Cassell, G.H.
Lindsey, J.R.
Research Complications Due to Haemobartonella and Eperythrozoon
Infections in Experimental Animals.
Am.J.Path. 64(3):625-656,1971.

Latent infections with Haemobartonella and Eperythrozoon interfered with the results of studies, especially those connected with reticulo-endothelial function, radiation injury, interferon induction and tumour transplantation. Aberrations in experimental data after activation of latent infections or accidental transmission of these agents often provided the only clue to their presence. The paper reviews the natural or accidental transmission and maintenance of the infections, alterations in reticuloendothelial and immune response of infected animals, mechanisms involved in activation of latent infections, detection and control measures (71 references).

NUMBER 01696

Kiselva, N.V.
Berdyliev, O.M.
(Domestic Animals (Dogs and Cats) as Carriers of
Human Intestinal Viruses.)
Zhurnal Mikrobiologii Epidemiologii i Immunobiologii
48(7):102-104,1971.

Samples of faeces from healthy dogs and faeces and organs from healthy cats were inoculated on human embryonic lung, and feline and bovine embryonic kidney cell cultures maintained in medium 199 without serum. Four ECHO virus strains (types 2 and 19) and one strain of Coxsackie A6 virus were isolated from dogs and two ECHO virus strains (types 6 and 19) from cats. Two enterovirus strains, one from a dog and one from a cat, were not identified. Kittens inoculated i/p at 3 weeks of age with a tissue culture preparation of ECHO 19 virus isolated from a dog developed signs of illness within 8-10 days, and this ECHO virus infection was transmitted to their dams by contact. An animal attendant who looked after these kittens developed pyrexia, general malaise, rhinitis and vomiting, and had a fourfold increase in neutralizing antibody to ECHO 19 virus. However, no signs of illness were observed in puppies inoculated with ECHO 19 virus isolated from dogs.

NUMBER 01697

Metianu, T.
Lucas, A.
Vallee, A.
Laurent, R.

(Studies on Aujesky's Disease in France: Isolation of the Virus from Two Cats.)
Bull.de l'Acad.Veter.France 44(5):221-228,1971.
The virus of Aujeszky's disease has been isolated for the first time in France from a cat, on tissue culture. Rabbits inoculated s/c with brain suspension from an infected cat died on the 4th day. Cats fed infected rabbit meat died between the 5th and 7th day showing the characteristic symptoms of the disease. The virus grown on pig or calf kidney cells showed cytopathic effects from the 48th hour. Dogs, cats, ferrets, rabbits and mice were infected by cerebral, s/c and ocular inoculation, the incubation period varying from 3 to 6 days.

NUMBER 01698
Giauffret, A.
(Study of a Virus Strain Responsible for Leucopenia in Cats.)
Bull.de l'Acad.Veter.France 44(4):195-202,1971.
A typhus-infectious enteritis type of illness in a cattery was caused by a virus, the pathogenicity of which for experimental cats and for cell cultures is described. The experimental disease in young cats, after an incubation period of 5-7 days, was characterized by leucopenia and death in 24-48 hours. Virus culture in cat kidney cells produced basophilic, intranuclear inclusion bodies. Virions 20-25 nm in diameter were demonstrated with the electron microscope.

NUMBER 01699
Hutchison, W.M.
Dunachie, J.F.
Ferguson, D.J.P.
Gardner, I.C.
Endogenous Development of the Coccidian Parasite Toxoplasma Gondii.
Trans.Roy.Soc.Tropic.Med.Hyg. 65(4):429-430,1971.
The endogeneous development of T. gondii in the cat is typically coccidian. The various stages are described briefly. The microgametocyte gives rise to only 12-30 microgametes. The oocyst measures 12.7 by 10.4 microm. and is similar to that of Isospora. It is sporulated outside the gut, giving rise to two sporocysts each containing four sporozoites.

NUMBER 01700
Daengsuang, S.
Sermsnatsri, B.
Youngyi, P.
Guname, D.
Development of Adult Gnathostoma Spinigerum in the Definitive Host (Cat and Dog) by Skin Penetration of the Advanced Third-Stage Larvae.

Southeast Asian J.Trop.Med.Publ.Hlth. 1(2):187-192, 1970.
The third-stage larvae penetrated the intact skin at a rate of 62-100% in cats and 39-100% in dogs. The penetration time ranged between 5 and 80 min. From the skin the larvae moved to the subcutaneous tissue, nearby muscle and were later detected in liver and diaphragm, abdominal tissue and chest wall. The appearance of eggs in the faeces was seen in cats from 2-7 1/2 months and in dogs 3-8 months after infection.

NUMBER 01701
Mullin, S.W.
Dindero, Y.J.
Youseff, M.
Sivanandam, S.
A Search for Natural Infections of Periodic Brugia Malayi in Cats.
Southeast Asian J.Trop.Med.Publ.Hlth. 2(2):263,1971.
All 75 cats, representing over half the cat population of the area surveyed, were negative for the infection.

NUMBER 01702
Farrow, B.R.H.
Huxtable, C.R.R.
Membranous Nephropathy and the Nephrotic Syndrome in the Cat.
J.Comp.Path. 81(4):463-467,1971.
Four cases of membranous nephropathy in cats are described. The condition in cats is similar in its clinical and biochemical manifestations to the disease in man. Each cat had the typical nephrotic syndrome with oedema, proteinuria, hypoproteinaemia and hypercholesterolaemia. The kidneys were macroscopically normal, but microscopic examination of kidney sections and electronmicroscopic examination of glomerular capillary walls revealed changes similar to those described in human cases of membranous nephropathy. Corticosteroid therapy produced a remission of clinical signs in the two cats treated although a mild degree of proteinuria persisted.

NUMBER 01703
Micheletto, B.
(Usefulness of the Examination of Frozen Sections During Surgery of Benign and Malignant Tumors in Domestic Animals.)
Ann.Facolta Med.Vet.Torino
18:161-181,1971.
Frozen sections made during operation involving neoplasms were compared with results from paraffin sections and were found to offer a high level of reliability (better than 93%) in 62 cases, 50 dogs, 7 cats, one each of bovine, ovine and equine origin, one hamster and one rabbit.

NUMBER 01704
Brodey, R.S.
Canine and Feline Neoplasia.
Advances in Vet.Sci.Comp.Med. 14:309-354,1970.
In this review the author has relied mainly on case material submitted to the University of Pennsylvania Veterinary Hospital. Tumours are largely discussed under the organ system involved. The data presented suggest that there is a much higher incidence of neoplasia in dogs than in cats and possible reasons for this are put forward. However nearly 80% of the feline tumours encountered were malignant, whereas the percentage of malignancy in dogs was much less. About a third of the tumours in dogs were skin tumours, mostly benign, but in cats haemopoietic tumours (mainly lymphosarcomas) were the commonest type seen and were almost invariably malignant. The author discusses breed incidence, geographical distribution and appeals for an interdisciplinary approach to the study of tumours and for standard histopathological criteria.

NUMBER 01705
Chervyakov, D.K.
Evdokimov, P.D.
Vishker, A.S.
(Therapeutic Substances in Veterinary Medicine.)
Lekarstvennye Sredstva v Vet.Izdatel'stvo Kolos, Moscow, 415 pages, 1970.
Readers and translators of Russian veterinary literature have always had difficulty in equating the Russian names of drugs with names used outside the Soviet Union. The situation was eased with the publication of 'Veterinary therapeutic substances' by Burkalev & Lodvanov (second edition 1969). Now Chervvakov et al. have provided an additional, and more detailed guide to drugs for veterinary use, with particulars of their action and uses.

NUMBER 01706
Balbo, T.
Panichi, M.
(Use of Tetramisole as an Anthelmintic in Small Animals.)
Ann.Facolta Med.Vet.Torino
18:135-149,1971.
To assess it efficacy, tetramisole marketed as Citarin, was given s/c at the rate of 10 mg/kg to 60 dogs and 25 cats naturally infected with ascarids. Untreated controls were 10 dogs and 15 cats which were studied P.M. Faecal worm egg counts of 50 treated dogs were carried out for 15 days after treatment and a high level of efficacy and low toxicity are reported.

NUMBER 01707
Pozzi, L.

(Evaluation of the Clinical Condition of the Heart in
Animals by its Dimensions on Radiographs.)
Ann.Facolta Med.Vet.Torino 18:479-502,1971.
Three methods, namely those of Schulze and Noldner, Uhlig and Werner and of Hamlin using different photographic axes for X-ray examination of variable heart lesions in 16 calves, 83 dogs and 9 cats are described, discussed, statistically assessed and analysed. Results obtained indicate that with certain modifications such examinations can have useful application in veterinary clinical studies in calves and dogs and probably also in the cat, but in this species only one of the subjects examined had a cardiac lesion.

NUMBER 01708
Borthwick, R.
Robbie, B.
Large Volume Urography in the Cat.
J.Small Anim.Practice 12(10):579-583,1971.
A radiographic technique using large volumes of intravenous iodine-containing contrast media, which proved useful for the examination of the upper urinary tract and bladder of cats is described. The effectiveness and safety of the procedure in cases of cats with high blood urea levels and metastatic tumours in the kidneys is discussed.

NUMBER 01709
Dlugach, J.
Diabetes Mellitus in a Cat.
J.A.V.M.A. 132:538-539,1958.

NUMBER 01710
Exley, S.H.
Nutrition of the Cat.
J.A.V.M.A. 132:538-539,1958.

NUMBER 01711
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Gershoff, S.N.
Lentini, E.
The Development of Palatability Tests for Cats.
Am.J.Vet.Res. 17:733-737,1956.

NUMBER 01712
Holzworth, J.
Specific Skin Disorders of the Cat.
Cal.Vet. 11-32(Jan.-Feb.),1958.

NUMBER 01713
Morris, M.L.

Nutritive Requirements of the Cat: A Preliminary
Report.
Vet.Med. 48:451-456,1953.
Suggests that high mineral diest induce urinary calculi.

NUMBER 01714
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Nutritive Requirements of the Cat.
Vet.Med. 49:85-86,1953.

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Nutritive Requirements of the Cat. II. The
Feeding of Cats Exclusively on Canned, Sterilized
Foods.
North.Amer.Vet. 36:468-471,1955.

NUMBER 01716
Sattell, R.
Cystitis, With Resultant Pyonephrosis and an Enlarged
Ureter in a Cat.
M.S.U. Vet 18(3):176-177,1958.

NUMBER 01717
Brown, K.T.
Wiesel, T.N.
Single Unit Activity at Different Levels of the Cat
Retina.
Fed.Proc. 17:20,1958.

NUMBER 01718
Lonley, W.H.
Factors Which Influence the Maturation of the Egg and
Ovulation in the Cat.
Science 31:465,1910.

NUMBER 01719
Van Der Stricht, R.
(Vitellogenesis in the Ovum of the Cat.)
Ann.de la Gand. 1908.

NUMBER 01720
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Experimental Studies of Adaptive Behavior in Cats.
Comp.Psychol.Monogr. 27:168,1929.

NUMBER 01721
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Some Factors of Observational Learning in Cats.

J.Genet.Psychol. 86:159-177,1955.

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Behavior Resembling Spontaneous Emission in the Domestic cat.
J.Comp.Physiol.Psychol. 42:226-227,1949.

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The Effects of Denervation of the Genitalia on the Estrual Behavior of Cats.
Amer.J.Physiol. 113:5-6,1935.

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Bard, P.
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Res.Publ.Assn.Nerv.Ment.Dis. 19:190-218,1939.

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Stewart, C.N.
Warren, J.M.
Pattern of Social Interaction in Cats.
Behaviour 11:56-66,1957.

NUMBER 01726
Beach, F.A.
Zitrin, A.
Jaynes, J.
Neural Mediation of Mating in Male Cats. I.Effects of Unilateral and Bilateral Removal of the Neocortex.
J.Comp.Physiol.Psychol. 49:321-327,1956.

NUMBER 01727
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Jaynes, J.
Neural Mediation of Mating in Male Cats. II. Contributions of the Frontal Cortex.
J.Exp.Zool. 130:381-402,1955.

NUMBER 01728
Berry, C.S.
An Experimental Study of Imitation in Cats.
J.Comp.Neurol.Psychol. 18:1-26,1908

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Solution of Oddity Problems by Cats.
J.Comp.Physiol.Psychol. 50:258-260,1957.

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Marks, L.D.
A Study of the Learning Process in the Cat in a Maze Constructed to Require Delayed Response.
J.Genet.Psychol.
40:206-209,1932.

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A Description of Parturition in the Domestic Cat.
J.Comp.Psychol. 37:71-79,1944.

NUMBER 01732
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The Significance of Past Sexual Experience in the Reappearance of Sexual Behavior in Castrated Male Cats Treated With Testosterone Propionate.
M.Sc. Thesis, New York Univ., N.Y., N.Y.,1960.

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Cooper, M.
The Role of the Adrenal Cortex in the Sexual Behavior of the Male Cat.
Ph.D. Thesis, New York Univ., N.Y., N.Y.,1961.

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A Study of "Experimental Neuroses" in Cats.
J.Comp.Psychol. 28:39-43,1939.

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The Relation of Strength of Stimulus to Rapidity of Habit-Formation in the Kitten.
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Conditioned Motor Reflexes in Cats.
Amer.J.Physiol. 109:31,1934.

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Psychosom.Med. 1:388-396,1939.

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Brit.J.Anim.Behav. 1:151-155,1953.

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Suckling Behavior in Kittens.
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A Study of Parturition in the Domestic Cat.
Anat.Rec. 111: Abstract No.90,1951.

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Rhinencephalic Lesions and Behavior in Cats.
J.Comp.Neurol. 108:505-545,1957.

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Artificially Induced Ovulation in the Cat (Felis Domestica).
Anat.Rec. 58:217-224,1934.

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Cats in a Puzzle Box.
New York, N.Y., Rinehart,1946.

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Observational Learning by Cats.
J.Comp.Psychol. 37:81-95,1944.

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The Behavior of Cats on the Double Alternation
Problem in the Temporal Maze.
J.Comp.Psychol. 26:201-208,1938.

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The Genesis of the Cats' Behavior Toward the Rat.
J.Comp.Psychol. 25:1-8,1930.

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J.Comp.Psychol. 25:1-8,1938.

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Experimental Study of the Cat.
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Controlled Observations on Behavior of Kitten Toward

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Mating Behavior of the Male Cat. The Role of Sexual
Experience and Social Adjustments.
Ph.D. Thesis, New York Univ., New York, N.Y.

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The Domestic Cat as a Laboratory Animal for the Study
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J.Physiol. 130:47P-48P,1955.

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Some Interesting Features in the Reproductive Cycle of
the Cat.
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Bietrage zur Kenntnis der Placentarbildung die
Placenta des Kaninchens mit Bemerkungen uber die
Placenta der Katze.
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Vergleich der Placentarbildung bei Meerschweinchen,

Kaninchen, und Katze, mit Dejenigen beim Menschen.
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The Nucleus Pulposus of the Intervertebral Disc of the Newborn Cat.
Res.Vet.Sci. 5:71-74,1964.

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Butler, W.F.
Smith, R.N.
Age Changes in the Annulus Fibrosus of the Non-Ruptured Intervertebral Disc of the Cat.
Res.Vet.Sci. 6:280-289,1965.

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Age Changes in the Nucleus Pulposus of the Non-Ruptured Intervertebral Disc of the Cat.
Res.Vet.Sci. 8:151-156,1967.

NUMBER 01779
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A Virus Disease of Cats, Principally Characterized by Aleukocytosis, Enteric Lesions and the Presence of Intranuclear Inclusion Bodies.
J.Exp.Med. 69:327-351,1939.

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Studies on Clinical and Histopathological Aspects of Feline Panleucopenia (Infectious Enteritis).
Southwest.Vet. 10:111-118,1957.

NUMBER 01781
Cody, F.W.J.
Lee, R.W.
Taylor, A.
Classification of Jaw Muscle Spindle Afferents in the Cat.
J.Physiol. 222:82-83,1971.
Much of our knowledge of muscle spindles comes from studies of hind-limb muscles of the cat. Histologically there appear to be approximately equal numbers of primary and secondary spindle afferents. Dorsal-root filament recordings have not been made which would permit this to be statistically corroborated by physiological evidence. However, in the case of the jaw muscles the first order afferent cell bodies, being situated in the mesencephalic nucleus of the trigeminal nerve are accessible to sampling by extracellular micro-electrodes in a way less likely to be biased according to fibre diameter. Units characterized as spindle afferents were examined for dynamic index DI using ramps (1-5 degrees of jaw opening from 8-5 degrees, at velocities of 1-0, 2-2, 3-25 and 4-5 degrees/sec), for small amplitude vibration driving, and for interspike interval

variability. Fusimotor activity was suppressed by deep pentobarbitone anaesthesia supplemented by chlorpromazine. Under these conditions a histogram of DI gave no evidence of two distinct populations of afferents but was indistinguishable from a log-normal distribution. In addition, neither the maximum vibration frequency followed nor the coefficient of variation allowed separation into two populations. However, the administration of suxamethonium (SCh) caused a marked change in the histogram of DI. It appears that some units with a previously low DI are capable, when activated with SCh, of a considerable dynamic response, and should probably be classed as primaries. It is concluded that the spindle afferents of the jaw muscles are functionally divisible into primary and secondary populations, in proportions similar to those of the limb muscles.

NUMBER 01782
Ringler, D.H.
Lay, D.M.
Abrams, G.D.
Spontaneous Neoplasms in Aging Gerbillinae.
Lab.Anim.Sci. 22(1):407-413,1972.

Twelve spontaneous neoplasms were noted in a colony of wild caught and first or second generation laboratory raised Gerbillinae. All of the neoplasms occurred in animals over 2 years old. The neoplasms included osteogenic sarcoma, subcutaneous neurofibroma, subcutaneous fibrosarcoma, ovarian leiomyoma, thymoma, reticulum cell sarcoma, cutaneous squamous cell carcinoma, ovarian granulosa cell tumor, and uterine adenocarcinoma. Neoplasms were a significant cause of morbidity and mortality in these aging animals.

NUMBER 01783
Stanley, R. Z.
Lloyd, S.R.
A Technic for Implanting a Radioactive Particle in a Rodent Lung.
Lab.Anim.Sci. 22(1):424-427,1972.

A simple and relatively atraumatic technic for implanting a single radioactive particle in the lung of rodents (hamsters and rats) was described. A small polyethylene cannula introduced in the trachea of an anesthetized rodent provided the passageway for the insertion into the deep lung of a fine catheter containing a radioactive particle. Also described was the relative ease of implanting the particle in a particular lobe of the lung. In more than 300 hamsters (Mesocricetus auratus) successfully implanted, 77% were implanted in the intended lung lobe. Methods and devices used for animal restraint were also presented.

NUMBER 01784
Alm, A.
Bill, A.
The Oxygen Supply to the Retina. II. Effects of High Intraocular Pressure and of Increased Arterial Carbon Dioxide Tension on Uveal and Retinal Blood Flow in Cats. A Study with Radioactively Labelled Microspheres Including Flow Determinations in Brain and Some Other Tissues.
Acta Physiol.Scand. 84:306-319,1972.
15 microns and 35 microns microspheres labelled with 85-Sr and 169-Yb were used to determine the rate of blood flow through various intraocular tissues, optic nerve, brain, kidney cortex and small intestine in cats at normal and increased P(arterial)CO-2. One eye had its spontaneous intraocular pressure, the other eye had its pressure stabilized at a higher level. At normal P(arterial)CO-2 a reduction in perfusion pressure resulted in decreased vascular resistance in the iris, the ciliary body and the retina, but not in the choroid. In the retina the eye with reduced perfusion pressure had a significantly higher blood flow than the control eye. Increased P(arterial)CO-2 resulted in increased blood flow in all ocular tissues and all extraocular tissues studied except the kidney cortex. Reductions in perfusion pressure at high P(arterial)CO-2 resulted in further decreases in vascular resistance in two eyes of seven only. The results suggest that about 21% of the Oxygen consumed by the retina is delivered by the retinal blood vessels, the rest by the choroid. Both myogenic and metabolic mechanisms seem to contribute to the adjustment of retinal vascular resistance after a change in perfusion pressure.

NUMBER 01785
Alm, A.
Bill, A.
Blood Flow and Oxygen Consumption in the Cat Uvea at Normal and High Intraocular Pressures.
Acta Physiol.Scand. 80:19-28,1970.

NUMBER 01786
Bill, A.
A Method for Quantitative Determination of the Blood Flow Through the Cat Uvea.
Arch.Ophthal. 67:156-162,1962.

NUMBER 01787
Folkow, B.
Lundgren, O.
Wallentin, I.
Studies on the Relationship Between Flow Resistance, Capillary Filtration, Coefficient and Regional Blood Volume in the Intestine of the Cat.
Acta Physiol.Scand. 57:270-283,1963.

NUMBER 01788
Lockett, M.C.
Effects of Changes in P-O2, P-CO2 & pH on the Total Vascular Resistance of Perfused Cat Kidneys.
J.Physiol.(London) 193:671-678,1967.

NUMBER 01789
McGinn, F.P.
Mendel, D.
Perry, P.M.
The Effects of Alteration of CO2 and pH on Intestinal Blood Flow in the Cat.
J.Physiol.(London) 192:669-680,1967.

NUMBER 01790
McAllen, R.M.
Spyer, K.M.
'Baroreceptor' Neurones in the Medulla of the Cat.
J.Physiol. 222:68-69,1971.
The localization of second order neurones in the baroreceptor reflex pathway is at present a subject of much interest and is an essential preliminary to a full investigation of the reflex pathway through the central nervous system. It is accepted on histological evidence that they are located primarily in the nucleus of the tractus solitarius (NTS), but positive evidence still has to be obtained by means of neurophysiological techniques. In the present study neurones whose activity was excited on electrical stimulation of the carotid sinus nerve were recorded extracellularly using conventional techniques, the position of the cells being marked with pontamine sky blue. In all, 148 such units were recorded in many penetrations made throughout an area of the medulla extending from 2 mm caudal to 4 mm rostral to the obex and 0-4 mm lateral to the mid line. The major projections of the afferent fibres were to two regions. The first included the ventrolateral portion of the NTS and appeared to be continuous with a projection within the nucleus parvocellularis. The second major projection was to an area ventrolateral to the hypoglossal nucleus, yet lateral to the hypoglossal fibre tract. The medial portion of the NTS and the nucleus intercalatus received a small projection. In keeping with a recent study, no projections were found to be paramedian reticular nucleus. The sinus nerve contains afferent fibres originating both in the baroreceptors of the carotid sinus and the chemoreceptors of the carotid body. There is a marked overlap in fibre diameter of these two groups, and hence it is impossible to excite preferentially one functional group using electrical stimulation. Accordingly, the baroreceptor afferent endings were excited by raising the perfusion pressure in an isolated carotid sinus. So far 36 units responding to

sinus nerve stimulation have also been found sensitive to inflation of the ipsilateral carotid sinus. These neurones were located in just those areas of the medulla previously shown to receive a major input from the sinus nerve. Nine neurones sensitive to sinus nerve stimulation were unaffected by baroreceptor afferent activation, and presumably represent neurones involved in the chemoreceptor reflex pathway.

NUMBER 01791

Sobin, S.S.
Fung, Y.C.
Tremer, H.M.
Rosenquist, T.H.
Elasticity of the Pulmonary Alveolar Microvascular Sheet in the Cat.
Circulation Res. 30:440-450,1972.

The pulmonary interalveolar capillary bed of the cat has previously been shown to be consistent with a sheet-like endothelium-lined space bridged by avascular endothelium-covered posts. This was termed the sheet-flow model, and blood flow through that space is termed sheet flow. The initial formulation of the sheet-flow theory and model required that sheet thickness be the independent variable. Sheet thickness (h) was measured in vertical and horizontal silicone-elastomer-perfused cat lungs over the transmural (alveolar-capillary) pressure (p) range of 6.3 to 27 cm H2O. A plot of h vs. p for 2753 individual measurements is linear over the measured pressure range. The regression line is described by h=4.28+0.2191 p. Sheet thickness of 4.28 microns at zero pressure is an extrapolated value. The value 0.2191 microns/cm H2O is the compliance coefficient (alpha) of the pulmonary capillary bed. Electron microscopic studies demonstrated that the capillary posts have a highly organized internal structure with abundant collagen and an elastin or elastinlike core. Collagen fibers originate from the alveolar-capillary basement membrane, emerge in a herringbone pattern, and sweep toward the center of the post in a helical array around the elastinlike amorphous and fibrillar core. The unusual compliance of the microvascular blood vessels in the lung can be correlated with the architectural organization within the posts.

NUMBER 01792

Sobin, S.S.
Tremor, H.M.
Fung, Y.C.
Morphometric Basis of the Sheet-Flow Concept of the Pulmonary Alveolar Microcirculation in the Cat.
Circ.Res. 26:397-414,1970.

NUMBER 01793

Sampson, G.R.

Counter, F.T.
Schlegel, B.F.
Rathmaker, R.P.
Antibody Response of Cats Vaccinated With an Inactivated Cell Culture Feline Panleukopenia Vaccine.
J.A.V.M.A. 160(12):1619-1621,1972.
Feline panleukopenia virus strain CU4 isolated from a clinically affected cat was grown on primary cell cultures of feline kidney origin. In clinical trials with the vaccine produced by inactivation of this virus, increased antibody titers were detected in 66 of 69 cats more than 8 weeks old and in 10 of 17 cats 7 to 8 weeks old-both groups with prevaccination titers of less than 1:10. In these same clinical trials, 20 of 34 cats more than 8 weeks old and 2 of 8 cats 7 to 8 weeks old with prevaccination titers of equal to or greater than 1:10 developed an increased titer. Differences in antibody response were not detected between cats vaccinated intramuscularly and those vaccinated subcutaneously. Three of 3 vaccinated cats withstood challenge of immunity at the 376th day after vaccination. A survey of the serologic status of nonvaccinated cats indicated that 83% of cats 9 to 16 weeks old and 63% of cats 1 to 8 years old had antibody titers of less than 1:10.

NUMBER 01794
Fastier, L.B.
Feline Panleukopenia: A Serological Study.
Vet.Rec. 83:653-655,1968.

NUMBER 01795
Jolley, R.L.
Mrochek, J.E.
Scott, C.D.
Lowrey, J.C.
Body Fluid Constituents of Dogs.
Vet.Med./Small Anim.Clin. 67(7):794-800,1972.
The uv-absorbing and carbohydrate constituents of urine were determined for three dogs: a Bernese Mountain dog, a normal Dalmatian, and a urate-stone-producing Dalmatian before and during allopurinol therapy. As expected, allopurinol therapy caused a decrease in the excretion of uric acid and an increase in the excretion of xanthine, hypoxanthine, and adenine. The excretion rates of uracil, N(1)-methyl-2-pyridone-5-carboxamide, orotidine, and orotic acid were also increased. The effect on purines and pyrimidines agrees with previously reported work on human subjects. However, the increase in the excretion of N(1)-methyl-2-pyridone-5-carboxamide has not previously been reported. Most of the urinary excretion rates for the dogs and humans are in reasonable agreement, although some major differences (hippuric, p-hydroxyhippuric, kynurenic, and indoleaceturic acids) do exist.

NUMBER 01796
Hakanson, R.
Owman, C.
Sundler, F.
Fluorescence Histochemical and Microspectrofluorometric Evidence of Tryptophyl Peptides in Thyroid C Cells of Cat and Pig.
J.Histochem.Cytochem. 20(3):205-210,1972.

In the thyroid gland of cat and pig, combined formaldehyde-ozone treatment induces a strong greenish yellow fluorescence (maximal excitation/emission, 370/510 millimicrons) in cells identified as C cells by argyrophil staining. With the formaldehyde-ozone treatment, authentic tryptamine as well as tryptophyl peptides in protein droplet models gave a similar, strong fluorescence. Combined formaldehyde-HCI treatment gave only moderate C cell fluorescence. With this treatment the fluorescence yield of tryptophyl peptides in protein droplet models was low, whereas that of tryptamine was high (of the same magnitude as after formaldehyde-ozone). Chemical analysis failed to reveal tryptamine in extracts of thyroid glands. Together, the microspectrofluorometric and chemical results indicate that the fluorogenic compound in the C cells of cat and pig is a tryptophyl peptide rather than tryptamine.

NUMBER 01797
Wheeler, J.K.
Moghissi, A.A.
Rehnberg, B.F.
Colvin, M.C.
Comparison Between the Biological Half-Life of a Tritiated Luminous Compound with That of Tritiated Water in Rats and Cats.
Health Physics 22:35-38,1972.

A single oral dose of a tritiated luminous compound in common usage by the luminous dial painting industry was given to rats and cats, and the tritium concentration followed in the urine, feces and various body tissues. A major fraction of the absorbed tritium was eliminated with a biological half-life essentially the same as that of tritiated water.

NUMBER 01798
Lippincott, C.L.
Use of the Micrometer Trephine in Surgical Treatment of the Intervertebral Disc Syndrome.
Vet.Med/Small Anim.Clin. 67:643-648,1972.

A trephine, whose depth of penetration can be controlled by pre-setting a stop, is described and its use in relief of spinal cord pressure due to rupture of nucleus pulposus is shown.

NUMBER 01799

Smith, J.B.
Hill, H.H.
Use of Hemostatic Clips in Veterinary Surgery.
Vet.Med/Small Anim.Clin. 67:764-766,1972.
A small, permanent tantalum "clip" is described for use in closure of individual blood vessels instead of ligation. A forceps designed to apply the clips and the use of the clips are explained. Advantages include more rapid than ligatures, less blood in the field, and smaller field can be used.

NUMBER 01800

Ditchfield, J.
Grinyer, I.
Feline Rhinotracheitis Virus: A Feline Herpes Virus.
Virology 26:504-506,1965.

NUMBER 01801

Anufriew, W.N.
(The Nerves of the Heart of the Cat.)
Ztschr.f.Anat.u.Entwg. 86:639-654,1928.
A detailed morphologic description of the innervation of the cat's heart.

NUMBER 01802

Bernhardt, E.
(Anatomic and Physiologic Studies of the Depressor Nerve of the Cat.)
Dissertation Dorpat, 1868.

NUMBER 01803

Boehm, R.
(Studies of the Nervus Accelerator Cordis of the Cat.)
Arch.f.Exp.Path.u.Pharm. 4:255-279,1875.

NUMBER 01804

Anthony, R.
(Anatomical Aspects of the Sacro-caudal Region of a Cat of the So-called Tailless Breed From the Isle of Man)
Bull.Soc.Anthr.Paris 4(10):303-310,1899.

NUMBER 01805

Anthony, R.
(On a Tailless Cat From the Isle of Man.)
Ann.Soc.Agric.Indust, Lyon 7(7):41-50,1899.

NUMBER 01806

Abonyi, L.
(Thallium Poisoning in the Dog and Cat.)
Allatory.Lapok. 14:216-217,1932.

NUMBER 01807
Czaplinski, F.
(Thallium Poisoning in Cats.)
Med.Wtryn. 6:531-533,1950.

NUMBER 01808
Gratzl, E.
(Thallium Poisoning in Small Animals.)
Wien.Tierarztl.Monatsschr. 23:657-674,1939.
Of 8 cats, 1 of 2 which had received 10 mg/kg body weight died, 1 which had 15 mg/kg recovered after a month of severe skin lesions, and 5 which had 20 mg or more per kg died.

NUMBER 01809
Pile, C.H.
Thallium Poisoning in Domestic Felines.
Austral.Vet.J. 32:18-19,1956.

NUMBER 01810
Leinert, E.
Sebesta, E.
(Treatment of Thallium Poisoning in Carnivores with BAL.)
Wien.Tierarztl.Monatsschr. 40:327-332,1953.
Three cats given 30 mg or more of thallium per kg of body weight died.

NUMBER 01811
Hensel, H.
Ein Warmeempfindliches Receptorfeld in der Nasenregion der Katze.
Naturwissenschaften 55:233,1968.

NUMBER 01812
Kenshalo, D.R.
The Temperature Sensitivity of Furred Skin in Cats.
J.Physiol.(London) 172:439-448,1964.

NUMBER 01813
Kenshalo, D.R.
Duncan, D.G.
Weymark, C.
Thresholds for Thermal Stimulation of the Inner Thigh, Footpad, and Face of Cats.
J.Comp.Physiol.Psychol. 63:133-138,1967.

NUMBER 01814
Wintrobe, M.M.

Variations in the Size and Hemoglobin Content of
Erythrocytes in the Blood of Various Vertebrates.
Folia Haematologica 51:32-49,19?
Erythrocyte counts, hemoglobin, volume of packed red cells and icterus index determinations, diameter measurements and the calculated mean corpuscular volume, mean corpuscular hemoglobin and mean corpuscular hemoglobin concentration of the blood of a variety of vertebrates are recorded. It appears that in spite of very great differences in the size and hemoglobin content of erythrocytes of various vertebrates, the concentration of hemoglobin in these cells, that is, the relation of amount of hemoglobin to volume of red cell, remains remarkably constant. Not only does there seem to be an optimum mean corpuscular hemoglobin concentration but also a maximum concentration. There is a tendency towards a reciprocal relationship between number of red corpuscles and their size and hemoglobin content, with the result that there are much smaller differences in red cell mass and in total hemoglobin of the blood than the variations in erythrocyte counts would suggest. The possible significance of morphologic differences in the red corpuscles of various vertebrates is breifly considered.

NUMBER 01815
Coote, J.H.
Johns, E.J.
Singer, B.
Renal Nerve Stimulation and Plasma Renin Activity in the Cat.
J.Physiol.(London) 222:73-74P,1971.
Vander has reported that stimulation of the renal nerve-artery complex in the dog results in an increased secretion rate of renin as measured in the renal vein. The present study was undertaken to determine whether prolonged electrical stimulation of the distal ends of cut renal nerves resulted in an increase in plasma renin activity (PRA) in the cat, whether the effect was related to changes in renal blood flow and whether the effect could be blocked by alpha and beta blockers. The results are compatible with the view that the change in PRA following renal nerve stimulation is mediated by the reduction in blood flow produced by stimulation. The results using propranolol suggest that the reduction in blood flow affects the renin-releasing mechanism through a receptor, not located on vascular smooth muscle, which is sensitive to the beta blocker.

NUMBER 01816
Ward, J.M.
Wright, J.F.
Pathology of Radiostrontium Exposure in Cats.
Rad.Res. 51(1):84-96,1972.
Thirty-three cats of two age groups were fed one of three dosage levels of 89 Sr for 30 days. Twenty-four died or

were killed before 107 days after the experiment was started. Mortality and bone marrow lesions were dose related. All cats had varying degrees of a hemorrhagic disease with hemorrhages most commonly observed in the heart, subcutis and intestines. Histologically, bone marrows of cats dying before 35 days postexposure were depleted of cells. Those dying later had cellular marrows composed predominantly of erythropoietic precursors. Myelofibrosis was seen in 5 cats and myeloid metaplasia, primarily in lymph nodes, developed in 6 cats. Dysplastic lesions occurred in the epiphyseal plate and metaphysis of long bones. Other lesions included atrophy of the thymus and lymphoid tissues and bacterial lesions in several tissues. Ultrastructural studies of bone marrow of 4 cats revealed degenerative changes in mitochondria of plasma cells and the presence of abnormal erythrocyte precursors. Comparative aspects of the pathology of radiostrontium exposure are discussed.

NUMBER 01817
Neff, C.A.
Davis, L.E.
Baggot, J.D.
A Comparative Study of the Pharmacokinetics of Quinidine.
Am.J.Vet.Res. 33(7):1521-1525,1972.
Plasma concentrations of quinidine and kinetics of its disappearance from plasma after intravenous administration were determined in ponies, goats, swine, dogs, and cats. Plasma half-life values varied from 0.85 hours in goats to 5.59 hours in dogs. Quinidine attained distribution equilibrium very rapidly and was sequestered in the tissues. Apparent specific volumes of distribution ranged from 1.25 L./kg. in swine to 6.32 L./kg. in ponies. The drug was extensively bound to plasma proteins, with values ranging from 77% in caprine plasma to 98% in porcine plasma.

NUMBER 01818
Baggot, J.D.
A Comparative Study of the Pharmacokinetics and Biotransformation of Amphetamine.
Ph.D. Dissertation, Ohio State Univ., Columbus, Ohio, 1971.
The cat eliminated amphetamine much more slowly than other species.

NUMBER 01819
Davis, L.E.
Sturm, B.L.
Drug Effects and Plasma Concentrations of Pentazocine in Domesticated Animals.
Am.J.Vet.Res. 31:1631-1635,1970.
The cat eliminated pentazocine much more slowly than

other species.

NUMBER 01820
Davis, L.E.
Westfall, B.A.
Species Differences in the Biotransformation and Excretion of Salicylate.
Am.J.Vet.Res. 33:1253-1262,1972.
The cat eliminated salicylate much more slowly than other species. Mechanisms for glucuronide and glycine conjugation of salicylate were deficient in cats.

NUMBER 01821
Davis, L.E.
Donnelly, E.J.
Analgesic Drugs in the Cat.
J.A.V.M.A. 153:1161-1167,1968.
The oxidation of meperidine proceeds quite rapidly in the cat. The duration of plasma levels, analgesic potency, and the occurrence of untoward effects of morphine, meperidine, aspirin, chlorpromazine, and d-propoxyphene were studied in domestic cats. Results indicated that aspirin should seldom, if ever, be given to cats because of its low efficacy and potential toxicity. Morphine and d-propoxyphene in the recommended doses were useful in obtunding experimentally induced pain. The usefulness of meperidine is limited because of rapid metabolism by the cat. Chlorpromazine markedly altered the behavioral responses to pain. We believe that the results of this investigation justify the clinical trial of morphine and d-propoxyphene, alone or in combination with chlorpromazine, in the management of pain in the feline patient.

NUMBER 01822
Medway, W.
Geraci, J.R.
Distribution of Glucose in the Bottle-Nosed Dolphin (Tursiops truncatus).
Am.J.Vet.Res. 33(7):1545-1546,1972.
The ratio of cell to plasma glucose concentrations in the adult dolphin is comparable to those found in adults of the common domesticated species of animals. For 8 dolphins, the following are mean and S.D. values for glucose: whole blood (mg%), 135.3 +/- 32.7; plasma (mg%), 183.6, +/- 41.8; erythrocytic (mg%), 58.5 +/- 19.4; ratio of cell to plasma concentrations (%), 33 +/- 12. PCV is 40 +/- 4.6. Author also gives the ratio of cell to plasma concentration of glucose (%) for the cat as 26.

NUMBER 01823
Jones, D.C.L.

Krebs, J.S.
Hematological Characteristics of Sheep.
Am.J.Vet.Res. 33(7):1537-1540,1972.
Measurement of hematologic values for more than 700 sheep has revealed marked departures from the normal distribution for erythrocyte, total leukocyte, granulocytic leukocyte, and mononuclear leukocyte counts. Percentages of granulocytic and mononuclear leukocytes and packed cell volumes were normally distributed, but the last measure exhibited significant inhomogeneity of variance. There were significant differences among the 6 groups of sheep for all hematologic variates. These findings illustrate the range of hematologic values likely to be encountered in groups of sheep from the same geographic area and indicate the need for caution in applying or interpreting statistical analyses based on the assumption of a normal distribution.

NUMBER 01824
Frumkes, T.E.
Battersby, W.S.
Storck, L.E.
Spatial Organization of Cat Visual System. I Distribution and Interaction of Photic Responses in Cortex.
Electoencephal.Clin.Neurophysiol. 32:383-394,1972.
The distribution of photic responses in the parasagittal cortical plane of the locally anesthetized cat was studied with respect to target location in the vertical plane of the visual field, level of adapting background, intensity of light flash, and the degree of spatial and temporal interaction elicited by dual light flashes. Confirming earlier studies, the cortical locus of the largest amplitude, shortest latency response (the "maximal" response) shifted predictably with change in field location, independent of adaptive level, flash intensity or presence of general anesthesia (barbiturate). All photic stimulation in the locally anesthetized cat, however, produced a widespread cortical distribution of lower level ("submaximal") responses which were of functional significance, as demonstrated by the spatial interaction between responses to dual light flashes. This latter spatial interaction could be elicited interocularly and was altered by administration of barbiturates. Results both confirm and qualify classic concepts of topological projection as applied to the visual system of the cat.

NUMBER 01825
Bilge,M.
Bingle, A.
Seneviratne, K.N.
Whitteridge, D.
A Map of the Visual Cortex in the Cat.
J.Physiol.(London) 191:116P-118P,1967.

NUMBER 01826
Bishop, P.O.
Kozak, W.
Vakkur, G.J.
Some Quantitative Aspects of the Cat's Eye: Axis and Plane of Reference, Visual Field Coordinates and Optics.
J.Physiol.(London) 163:466-502,1962.

NUMBER 01827
Doty, R.W.
Potentials Evoked in Cat Cerebral Cortex by Diffuse and Punctiform Photic Stimuli.
J.Neurophysiol. 21:437-464,1958.

NUMBER 01828
Fleming, T.C.
Evarts, E.V.
Multiple Response to Photic Stimulation in Cats.
Amer.J.Physiol. 197:1233-1236,1959.

NUMBER 01829
Garey, L.J.
Powell, T.P.S.
The Projection of the LGN Upon the Cortex in the Cat.
Proc.Roy.Soc.B. 169:107-126,1967.

NUMBER 01830
Garey, L.J.
Powell, T.P.S.
The Projection of the Retina in the Cat.
J.Anat.(London) 75:434-440,1968.

NUMBER 01831
Hubel, D.H.
Wiesel, T.N.
Receptive Fields and Functional Architecture in Two Non-Striate Visual Areas (18-19) of the Cat.
J.Neurophysiol. 28:229-289,1965.

NUMBER 01832
Joshua, D.E.
Bishop, P.O.
Binocular Single Vision and Depth Discrimination Receptive Field Disparities for Central and Peripheral Vision and Binocular Interaction on Peripheral Single Units in Cat Striate Cortex.
Exp.Brain Res. 10:389-416,1970.

NUMBER 01833
Nimi, K.
Sprague, J.M.
Thalamo-Cortical Organization of the Visual System in the Cat.
J.Comp.Neurol. 138:219-250,1970.

NUMBER 01834
O'Leary, J.L.
Structure of the Area Striata of the Cat.
J.Comp.Neurol. 75:131-164,1941.

NUMBER 01835
Spinelli, D.N.
Barrett, T.W.
Visual Receptive Field Organization of Single Units in the Cat's Visual System.
Exp.Neurol. 24:76-78,1969.

NUMBER 01836
Woolsey, C.N.
Daube, J.R.
Hoffman, J.
Kaas, J.H.
Ladpli, S.
Representation of the Visual Field in Visual Areas I and II of the Cat's Cerebral Cortex.
Fed.Proc. 26:656,1967.

NUMBER 01837
Storck, L.E.
Battersby, W.S.
Frumkes, T.E.
Spatial Organization of Cat Visual System. II. Topology and Interaction in Geniculo-Cortical Projection.
Electroenceph.Clin.Neurophysiol. 32:395-408,1972.
Spatial projection in the cerebral visual system of the cat was analyzed by recording the distribution of responses in the parasagittal cortical plane, that were evoked by electrical stimulation of varying anterior-posterior sites within the lateral geniculate body (LGB). A high degree of spatial correspondence was found between site of cathodal stimulating current in layer A (occasionally A1) of LGB, and that cortical ("peak") locus yielding the shortest latency, largest amplitude (the "maximal") response. Stimulation of all sites in LGB, however, produced a widespread cortical distribution of smaller amplitude, longer latency ("submaximal") responses, which were not simple electrotonic gradients, and which were not materially altered by either chemical depression or surgical removal of the peak locus. The significance of these widespread submaximal responses for spatial

interaction was assessed by means of "conditioning" and "test" shocks presented to disparate sites within LGB. Two types of excitability cycles were thus demonstrated, the relative amplitudes of the conditioning and test responses at any selected cortical locus determining the nature of the cycle. If the test response were smaller than the conditioning response (generally as the peak locus for the conditioning response), it was markedly attenuated for up to 200 msec. If the test response were greater than the conditioning response (generally at the peak locus for the test response), it was usually slightly facilitated, at least at short time intervals. Collectively, the findings suggest that a lateral interactive mechanism exists in visual cortex, and is superimposed upon a topological projection, presumably determined by the course of the radiation fibers.

NUMBER 01838
Bentinck-Smith, J.
Feline Panleukopenia (Feline Infectious Enteritis). A Review of 574 Cases.
North Amer.Vet. 30:379-384,1949.

NUMBER 01839
Bittle, J.L.
Emery, J.B.
York, C.J.
McMillen, J.K.
Comparative Study of Feline Cytopathogenic Viruses and Feline Panleukopenia Virus.
Amer.J.Vet.Res. 22:374-378,1961.

NUMBER 01840
Hammon, W.D.
Enders, J.F.
A Virus Disease of Cats, Principally Characterized by Aleukocytosis, Enteric Lesions and the Presence of Intranuclear Inclusion Bodies.
J.Exp.Med. 69:327-351,1939.

NUMBER 01841
Hammon, W.D.
Enders, J.F.
Further Studies on the Blood and the Hematopoietic Tissues in Malignant Panleukopenia of Cats.
J.Exp.Med. 70:557-564,1939.

NUMBER 01842
Johnson, R.H.
Isolation of a Virus From a Condition Simulating Feline Panleukopenia in a Leopard.
Vet.Rec. 76:1008-1013,1964.

NUMBER 01843
Johnson, R.H.
Feline Panleukopenia Virus. II. Some Features of the Cytopathic Effects in Feline Kidney Monolayers.
Res.Vet.Sci. 6:472-481,1965.

NUMBER 01844
Lawrence, J.S.
Syverton, J.T.
Shaw, J.S.
Smith, F.B.
Infectious Feline Agranulocytosis.
Amer.J.Path. 16:333-354,1940.

NUMBER 01845
Armistead, W.W.
Urethral Obstruction in Male Cats.
North Am.Vet. 34:276,1953.

NUMBER 01846
Beaner, R.J.
Ureterocolostomy for Relief of Urinary Stenosis in the Domestic Cat.
J.A.V.M.A. 134:201-204,1959.

NUMBER 01847
Bower, C.W.
Urinary Calculi in Castrated Male Cats.
North Am.Vet. 38:244,1957.

NUMBER 01848
Carbone, M.G.
Phosphocrystaluria and Urethral Obstruction in the Cat.
J.A.V.M.A. 147:1195-1200,1965.

NUMBER 01849
Fishler, J.
Urolithiasis or Urethral Impaction in the Cat.
J.A.V.M.A. 127:121-123,1955.

NUMBER 01850
Meier, F.W.
Urethral Obstruction and Stenosis in the Male Cat.
J.A.V.M.A. 137:67-70,1960.
NUMBER 01851
Hayden, D.W.
Nielsen, S.W.
Feline Mammary Tumors.

J.Smal Anim.Pract. 12:687-697,1971.
Fifty-five tumours (fifty malignant, five benign) of the mammary gland of cats were found among 2296 feline diagnostic accessions submitted over a 10-year period. Twenty-seven were adenocarcinomas, nineteen papillary adenocarcinomas, two scirrhous carcinomas, and two anaplastic carcinomas. The majority of the cats were between 10 and 14 years of age. No breed predilection was noted. Mixed mammary tumors, so common to the dog, are virtually non-existent in cats.

NUMBER 01852
Misdorp, W.
Title Unknown.
Dissertation, Utrecht, 1964.
Report on 24 cats in Amsterdam, Holland with mammary tumors.

NUMBER 01853
Uberreiter, O.
Title Unknown.
Wien.Tierarztl.Mschr. 55:415,1968.
Report on mammary tumors in cats.

NUMBER 01854
Whitehead, J.E.
Title Unknown.
Vet.Med. 62:357,1967.
Report of 30 cases of feline mammary tumors.

NUMBER 01855
Silver, I.A.
Title Unknown.
J.Small Anim.Pract. 7:689,1996.
Histology of feline mammary gland, where each teat has 4-8 ducts lined with stratified squamous epithelium.

NUMBER 01856
Stara, J.F.
Wellman, H.N.
Straub, C.P.
Cox, W.M.
Kahn, B.
Comparison of Selective Uptake and Retention of Strontium to Calcium in Young Cats and Infants.
Presented at the 3rd Internat. Congress of Radiation Research, 1966.
Retention of strontium-90, stable strontium, and calcium at environmental levels by 30 infants aged less than 1 year was determined previously by analyzing the diet, urinary, and fecal excretions. The observed ratio from diet to retention of strontium-90 and stable strontium relative to

calcium ranged between 0.2 and 1.0. Based on reported values for calcium accretion rates, endogenous excretion rates, body burden, and exchangeable pool in infants, half lives for strontium retention were computed for a two-compartment model. Strontium from the rapidly exchanging pool was estimated to be excreted with a 2-day half-life, and that from the slowly exchanging pool with a 300-day half-life. To confirm these estimates, distribution and excretion of strontium-85 tracer was observed in young cats. Uniform labelling of the skeleton was obtained by feeding the dam a diet with a constant strontium-85/strontium ratio before and during pregnancy, during lactation, and then feeding similar diets to the offsprings. Strontium-85 levels in the animals were measured by whole-body counting during tracer feeding and for a year following the last dose at ages 0, 1, 2, 4, 6, 8, 12, 16, 24, 32, 48, and 56 weeks. Strontium-85, stable strontium, and calcium were measured in urine and feces during the same period. A number of animals were sacrificed to determine the tissue distribution of strontium-85, stable strontium, and calcium. Short-term turn-over studies with calcium-47 and strontium-85 were also performed. Metabolic data for kittens aged 6, 8, 12, and 16 weeks were compared with similar information obtained in the infant study. The biological half-life of the long component of strontium retention in the 4 groups of kittens ranged between 290 and 350 days as measured by whole-body counting. The strontium-85 excretion rate of chronically labelled animals showed a half-life of 2 to 10 days immediately after last dose, and confirmed the longer half-life obtained by whole-body measurements. The retention of the radionuclides, measured either by whole-body counting or analysis of excreta, could be fitted to a power function or resolved into 3 exponential components. The fast and intermediate retention slopes upto 100 days post-dose were age dependent, whereas the long-term components were closely related in all 4 age groups and approached the half-life observed for those animals exposed chronically. The observed ratio from diet to bone of strontium relative to calcium ranged from 0.8 to 0.9 in the newborn and from 0.5 to 0.6 in the 8 and 16 week old animals.

NUMBER 01857

Laborde, G.
(Mycoplams of the Cat: Isolation, Identification, and Discussion of Their Role in Feline Respiratory Disease.)
Thesis, Ecole Nationale Vet.Lyon, 1971.

Mycoplasms were isolated from nasal, conjunctival and oral swabs taken from cats in two catteries affected with chronic rhinitis and episodes of acute coryza. The mycoplasms were shown to be pathogenic for unweaned kittens, which developed conjunctivitis, rhinitis, desquamative glossitis, and perianal abscess. Serum samples from 11 affected cats in these two catteries reacted to the HI test with M. felis antigen. Antigenic relationships were demonstrated between mycoplasms of the cat and those of the fowl and pig.

NUMBER 01858
Herron, M.A.
The Effect of Prepubertal Castration on the Penile Urethra of the Cat.
J.A.V.M.A. 160(2):208-211,1972.
Of 20 male kittens castrated when 8-14 weeks old, ten were given testosterone at 1 mg/lb body wt every 3 or 4 weeks. A further ten intact kittens served as controls. All were killed at 10 months of age, and the penis was removed for examination. The intact cats had greater urethral epithelium height and lower fibrocyte density. There were no significant differences in urethral circumference. The value of using testosterone after castration or to increase urethral diameter in cases of urinary calculi is questioned, since the reactions of the treated cats in this study did not differ from those of castrated, untreated cats.

NUMBER 01859
Priester, W.A.
Mantel, N.
Occurrence of Tumors in Domestic Animals. Data From 12 U.S. and Canadian Colleges of Veterinary Medicine.
J.Nat.Cancer Instit. 47(6):1333-1344,1971.
The distribution of 8634 tumours among 202277 animals is reported. Relative risk and relative frequency analyses revealed a number of differences in tumour distribution within and between the four main species: cattle, horses, cats and dogs. The proportions for each species of all tumours that were malignant were: cattle 70%, cats 69%, dogs 40%, horses 26%. The eye was the most frequent site for tumours in cattle, the skin for horses and dogs, and the haemic and lymphatic systems for cats. Tumours in cattle had the narrowest range of cell types; those in dogs the widest. The only unusual sex-related finding was an increased risk of malignant tumours for cows. An increasing tumour risk with age was seen in all the species, although equine tumours were less age dependent than in the other three species. A significantly increased tumour risk was noted in one bovine, two equine, and 14 canine breeds, as compared to all breeds within each species.

NUMBER 01860
Riser, W.H.
Brodey, R.S.
Biery, D.N.
Bone Infarctions Associated with Malignant Bone Tumors in Dogs.
J.A.V.M.A. 160(4):411-421,1972.

Bone sarcomas (3 osteosarcomas and 1 fibrosarcoma) developed in four small dogs with multiple bone infarctions. Only one of the neoplasms metastasized. In all four dogs, infarctions occurred in more than one bone. Radiographically, the infarcts were characterized by irregular intramedullary dense areas. Histologically the bone increased in mass, and many trabeculae contained empty lacunae that were overlaid by dense basophilic and mosaic-like new bone.

NUMBER 01861
Garner, M.B.
Rongey, R.W.
Johnson, E.Y.
DeJournett, R.
Heubner, R.J.
C-Type Tumor Virus Particles in Salivary Tissue of Domestic Cats.
J.Nat.Cancer Instit. 47(3):561-568,1971.
C-type RNA tumour virus particles were observed by electron microscopy in the submaxillary gland, parotid gland, and bone marrow tissues from almost every domestic cat with spontaneous lymphoma and fibrosarcoma induced by feline sarcoma virus. C-type particles were less frequent in these tissues from cats with severe anaemia, spontaneous sarcoma, or infectious peritonitis and were not seen in normal cats. Whether this finding is significant in the propagation and natural spread of this virus is unknown.

NUMBER 01862
Whitehead, J.E.
Neoplasia in the Cat.
Vet.Med./Small Anim.Clin. page 357-358, April, 1967.
Canines have a higher incidence of neoplasms thatn the cat. These two species also differ in the histological types, biological behavior and anatomical sites. The results of a survey of 165 tumors in cats is given.

NUMBER 01863
Roy, R.S.
(The Presence of R-Factors of Pathogenic Enterobacteria Isolated from Domestic Animals, Particularly the Dog.)
Can.J.Comp.Med. 36(1):1-8,1972.
Strains of enterobacteria (nine Escherichia coli and two Salmonella) isolated from primary or secondary infections in the dog, cat, pig, calf and kangaroo were studied for the presence of extrachromosomal drug resistance factors (R factors). Seven strains of E. coli and two strains of Salmonella transferred resistance involving the following antibiotics: streptomycin, ampicillin, chloramphenicol, neomycin and tetracycline. All strains harboring R factors transferred streptomycin resistance and the identified resistance patterns were as follows:

Sm Am, Sm Te, Sm Neo, Sm Am Te, Sm Cl Neo and Sm Am Cl Te. The levels of resistance observed were comparable for all donor strains and their converted recipients. Strains of E. coli harboring R factors were isolated from three dogs that died of either otitis (followed by a generalized infection), enteritis or bronchopneumonia - secondary to distemper. The bacteria islated from cats ere recovered at the necropsy of animals that had died of purulent pleuresy and feline panleukopenia. The other strains (two Salmonella and one E. coli) were isolated from fatal enteric diseases in the pig, calf and kangaroo.

NUMBER 01864
Gindhart, P.S.
The Effect of Seasonal Variation on Long Bone Growth.
Human Biology 44(3):335-350,1972.
Seasonal variation accounts for much of the variance in the growth of the tibia and radius in Fels subjects. In children aged one year to 9 years, the period of greater growth rate, based on semi-annual increments, occurred from August through January in the male radius and female tibia and from September through January in the female radius and male tibia. Seasonal variation does not seem to be established in the tibia in the first postnatal year, but there is a steady deceleration in growth rate as determined by three month increments during this time. However, in the male radius during the first year of life greater growth rate was found in June-August and in the female radius the greater rates occurred in January, March, August and September. The periods do not coincide with those based on semi-annual increments and are particularly irregular in the female.

NUMBER 01865
Krogman, W.M.
Growth of Man.
Tabulae Biologicae. 20,1941.

NUMBER 01866
Reynolds, E.L.
Sontag, L.W.
Seasonal Variations in Weight, Height and Appearance of Ossification Centers.
J.Pediat. 24:524-535,1944.

NUMBER 01867
Place, M.A.
In Practice Pointers.
Vet.Med./Small Anim.Clin. 67(11):1173,1972.
A technique for giving an injection to a cat while it is unaware is to slide it slowly across the table while the

injection is being made.

NUMBER 01868
Bolton, G.R.
Brown, T.T.
Mycotic Colitis in a Cat.
Vet.Med./Small Anim.Clin. p.978-981,1972.
The authors present a case of mycotic colitis in a cat possibly induced by long-term use of antibiotics as treatment for feline panleukopenia.

NUMBER 01869
Andres, S.
(Leukoses of Domestic Animals.)
Veterinary Thesis, No. 15, Lyons, 1959.
Report of a case of eosinophilic leukemia in a pig.

NUMBER 01870
Herringham, W.P.
Andrewes, F.W.
Two Cases of Cerebellar Disease in Cats, With Staggering.
St.Barth.Hosp.Rep. 24:211,1888.
First description of spontaneous feline ataxia.

NUMBER 01871
Johnson, R.H.
Cruickshank, J.G.
Problems in Classification of Feline Panleukopenia Virus.
Nature 212:622,1966.

NUMBER 01872
Johnson, R.H.
Margolis, G.
Kilham, L.
Identity of Feline Ataxia Virus with Feline Panleukopenia Virus.
Nature 214:175,1967.

NUMBER 01873
Kilham, L.
Margolis, G.
Viral Etiology of Spontaneous Ataxia of Cats.
Amer.J.Path. 48:991,1966.

NUMBER 01874
Verlinde, J.D.
Congenital Cerebellar Ataxia in Cats in Conjunction with a Probable Viral Infection of the Mother During Pregnancy.

Diergeneesk. 74:659, 1949.

NUMBER 01875
Hartmann, C.G.A
Title Unknown.
Quart.Rev.Biol. 4:373,1929.
The diameter of cat ova is about 125 microns.

NUMBER 01876
Przibram, H.
Title Unknown.
Tabulae Biologicae 4:342,1927 (Junk, Berlin).
The gestation time (days) and birthweigt (grams) respectively, for the lion and puma are: lion, 105 days and 1000 grams; puma, 92 days and 500 grams. The gestation period for the cat is given as 56 days.

NUMBER 01877
Franck, L.
Title Unknown.
Handbuch d.Tierarztlichen Geburtshilfe, Parey, Berlin, 1913.
Estimates the dams weight, in cats, to be 8.9 times that of the total mass of the fetal tissue formed, and 37.3 times that of the weight of one new-born. The weight of placenta to the weight of the embryo is 1:4.73 in cats.

NUMBER 01878
Milne-Edwards, H.
Lecons sur la Physiologie et L'atonomie Comparee de L'homme et des Animaux.
Masson, Paris, 1863.
The gestation period of the cat is given as 56 days.

NUMBER 01879
Schenk, S.L.
Vergl.Entnicklungsgesch.d.Wirbelthiere.
Vienna, 1874.
The period of gestation for the cat is given as 56 days.

NUMBER 01880
Vignes, H.
(Normal and Pathological Physiology of Obstetrics.)
Masson, Paris, 1923.
The cat's gestation is given as 50 days.

NUMBER 01881
Briffault, R.
The Mothers.

Allen and Unwin, London, 1927.
The mean weight of adults is given as 5.430 kilos. A factor of 10.3 per kilo of adult weight is given to estimate the gestation period in days.

NUMBER 01882
Moulton, C.R.
Title Unknown.
J.Biol.Chem. 24:229,1916.
The average length of gestation for the cat is 60 days; mean life span is 11 years. At birth, cat body composition is 83% water, 13% protein and 3% ash.

NUMBER 01883
Bunge, G.
Title Unknown.
Zeitschr.f.Biol. 10:326,1874.
The new-born doubles its weight in 9 days. Percentages of various chemicals in the cat at term are: P205, 40.23; CaO, 34.11; Mg3, 1.52; Cl, 7.12; Fez03, 0.24; K20, 10.11; Naz0, 8.28. The epithelial cells of the mammary gland select out the mineral constituents of the plasma exactly those inorganic substances, and in the right proportions, which are necessary for the further formation of the newly-born embryo.

NUMBER 01884
Abderhalden, E.
Title Unknown.
Zeitschr.f.Physiol.Chem. 27:462,1898.
The new-born doubles its weight in 9 days.

NUMBER 01885
Rubner, M.
Das Problem d.Lebensdauer und seine Beziehungen zu Wachstum und Ernahrung.
Oldenburg, Munich, 1908.
If a graph is constructed having the duration of pregnancy of different groups of animals as abscissae and the respective birth weights of their young as ordinates, the resulting curve is quite smooth and regular. For the cat, 4.304 Cals. is consumed per kilo in doubling the birth weight. The "energetische Nutzungsquotient" (the apparent energetic efficiency) for the cat embryo is 33.0%. During gestation the embryo fixes 7.3 grams of nitrogen daily by 100 grams of nitrogen.

NUMBER 01886
Edwards, F.
(Treatise on the Influence of Physical Agents on Life.)
Paris, 1824.

The temperature of newly born puppies, kittens and rabbits fell when removed from its warm surroundings, and continued to fall until it almost reached the temperature of the air. This condition is changed to an adult regulation at about 13 days of age for these species.

NUMBER 01887
Ginglinger, A.
Kayser, C.
Title Unknown.
Ann.Physiol.et Phys.-Chem.Biol. 5:710,1929.
The newborn cat has chemical, but not physical, heat regulation.

NUMBER 01888
Von Wittich, W.
Title Unknown.
In Hermann's Handbuch d.Physiologie. 5, Leipzig,1881.
The cat embryo, at term, has not large amounts of glycogen in its liver, only 0.23% of wet weight.

NUMBER 01889
Hammett, F.S.
Title Unknown.
J.Biol.Chem. 22:551,1915.
Quantitative data for nitrogen Partition in the urine of the cat are (% of total nitrogen excreted): ammonia, 4.9; urea, 68 1. uric acid, 0.1.

NUMBER 01890
Porcher, C.
Voron, J.
Tapernoux, A.
Title Unknown.
Comptes Rend.Soc.Biol. 83:420, and 619, and 1439,1920.
The kitten, at term, has 80 "units" of lactase activity in its small intestine.

NUMBER 01891
Bourquin, H.
Title Unknown.
Amer.J.Physiol. 59:129,1922.
The maternal blood amylase:fetal blood amylase for the guinea pig is 3, for the cat 18, and for the rabbit 1.5.

NUMBER 01892
Aron, M.
Stulz, E.
Simon, R.
Title Unknown.

Comptes Rend.Soc.Biol. 80:571,1923.
The pancreas of the fetal cat will protect its dam from hypoglycemia by production from fetal islet cells when the dam is pancreaectomized, much earlier than in the case of the dog.

NUMBER 01893
Vernon, H.M.
Title Unknown.
J.Physiol. 33:81,1905.
In the fetal, young and adult cat, the tissue-protease for fetal, zero-day new-born, 6-day old, and adults are (units not given): kidney, 3.1, 2.8, 4.4, 11.6; liver, 0.64, 0.73, 2.0, 3.6; heart muscle, 0.73, 0.37, 0.68, 0.95; skeletal muscle, 0.36, 0.31, 0.29, 0.56; brain, 0.52, 0.26, 0.31, 1.03; intestine, 0.0, 3.4, 11.8, 15.6.

NUMBER 01894
Rohde, E.
Title Unknown.
Zeitschr.f.Physiol.Chem. 68:181,1910.
For the cat, the heart muscle uses 24 ccm. oxygen per kilo per minute.

NUMBER 01895
Verzar, F.
Title Unknown.
J.Physiol. 44:243,1912.
The cat's skeletal muscle uses 4.5 ccm. of oxygen per kilo per minute.

NUMBER 01896
Bremer, J.L.
Amer.J.Anat. 19:179,1916.
Title Unknown.
Among mammals, the cat, the sheep, and the opossum all retain a functional mesonephros until the kidney is ready or later.

NUMBER 01897
Wislocki, G.B.
Title Unknown.
Anat.Rec. 21:29,1921.
The placenta of the cat, dog, rabbit and guinea pig are completely impermeable to carbon granules.

NUMBER 01898
$cunningham, R.S.
Title Unknown.
Amer.J.Physiol. 60:448,1922.
In the cat, sodium ferrocyanide goes through the placental

barrier but ferric ammonium citrate does not.

NUMBER 01899
Cohnstein, J.
Zuntz, N.
Title Unknown.
Arch.f.d.Ges.Physiol.(Pflugers). 34:173,1884.
In cats and guinea pigs, artificially induced hypoglycemia produced a corresponding rise in fetal blood sugar.

NUMBER 01900
Albano. T.
Title Unknown.
Arch.di Ostet.e Ginecol. 10:550,1903.
In the cat, the osmotic pressure of the maternal blood is -0.586, and of the fetal blood is -0.606, while the fetal side is higher in osmotic concentration. The amnionic liquid osmotic pressure is -0.569.

NUMBER 01901
Paton, D.N.
Watson, B.P.
Kerr, J.
Title Unknown.
Trans.Roy.Soc.Edin. 46:71,1907.
Fructose occurs normally in many fetal urines, and is also found in the amniotic fluid and allantoic fluid. Those animals which excrete a certain amount of protein in the urine have protein in the amniotic and allantoic fluids (cow, etc.), while those that do not have little or none.

NUMBER 01902
Sugimoto, M.
(A Catalogue of Parasites of Domestic Animals from Formosa.)
Tokyo, Yokendo, 1939.
First to describe a feline case of Toxascaris leonina in Formosa.

NUMBER 01903
Noda, C.
Title Unknown.
Proc. 10th Ann.Meeting of Nishi Nippon branch, Japan. Soc.Parasitol., p.48-49,1954.
Report of Toxascaris leonina in tigers and lions raised in a zoological garden in Osaka, Japan.

NUMBER 01904
Biggers, J.D.

McFeely, R.A.
Intersexuality in Domestic Mammals.
In: Advances in Reporductive Physiology, A.McLaren, editor, London, Logos Press, 1966.
The somatic number of chromosomes for the domestic cat is 38.

NUMBER 01905
Chu, E.H.Y.
Thuline, H.C.
Norby, D.E.
Triploid-diploid Chimerism in a Male Tortoiseshell Cat.
Cytogenetics 3:1-18,1964.
The somatic number of chromosomes for the domestic cat is 38.

NUMBER 01906
Cranmore, D.
Alpen, E.L.
Chromosomes of the Domestic Cat.
Nature 204:99-100,1964.
The cat has 38 chromosomes.

NUMBER 01907
Gutherz, S.
Das Heterochromosomenproblem bei den Vertebraten. I. Untersuchung der Fruhen Oogenese bei der Hauskatze.
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Further Karyological Studies on Felidae.
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Karyological Studies of Nine Species of Felidae.
Naturalist 97:225-234,1963.
The ocelot, the maruay cat, the jaguarondi, the puma, the lion, the leopard, the jaguar, and the cheetah all have 38 chromosomes.

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XX/XY Chimerism in a Tricolored Male Cat.
Cytogenetics 6:228-241,1967.
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A Study of the Chromosomes of the Cat.
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(The Chromosomal Formula of the Domestic Cat.)
C.R.Soc.Biol.(Paris) 117:435-435,1934.
The domestic cat has 38 chromosomes.

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On the Chromosomes of the Cat.
Proc.Imp.Acad.Jap. 1:128-130,1928.
The cat has 38 chromosomes.

NUMBER 01916
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(The Chromosomes of the Cat.)
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The Idiogram of the Domestic Cat.
Mammal.Chromosomes Newsletter, No.7, p.4,1962.
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(The House Cat and the Chinese Leopard Cat.)
"Kagaku no Taiwan" 9:1-7,1941.
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The cat has 38 chromosomes.

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(New Research on the Chromosomal Formula of the Cat Felis Domestica.)
Arch.Biol.(Liege) 49:111-142,1938.
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The Chromosomes of Three Species of Cats (Felis Nigripes, F.Bengalensis and F.Viverrina.)
Mammal.Chromosomes Newsletter, No.9, p.20,1968.
The leopard cat, the fishing cat and the black-footed cat each have 38 chromosomes.

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Somatic Chromosome Number in 20 Species of Mammals from India.
Mammal.Chromosomes Newsletter, No.17, p.77,1965.
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NUMBER 01924
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Wallach, E.E.
Histolochemical and Chemical Studies of the Autonomic Innervation of the Ovary.
Endocrinology 81:1132-1139,1967.
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The Presence of Smooth Muscle Cells in the Ovary of Several Mammals as seen Under the Electronmicroscope.
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Obstet.Gynecol. 6:619-624,1955.
Non-myelinated axons containing both agranular and granular vesicles are seen in close appoximation to primary follicles and in the cat ovary.

NUMBER 01927
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Endocrinology 84:1336-1341,1969.
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Congenital Porphyria in a Cat.
J.A.V.M.A. 145:462-463,1964.
A case of congenital porphyria in a cat.

NUMBER 01929
Lloyd, D.P.C.
Action of Sodium Acetylsalicylate Upon Body Temperature of the Cat.
Science 169:440,1968.
Aspirin in dosage reduced from 100 mg/kg to 30 mg/kg lowered rather than raised temperature in otherwise identical circumstances. A single I.V. injection of 100 mg/kg causes hyperthermia rather than antipyresis in cats.

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Central Nervous System Distribution and Metabolism of C14-Morphine During Morphine-Induced Feline Mania.
J.Pharmacol.Exptl.Therap. 149:146-155,1965.
The cat conjugates morphine less readily than does the dog and monkey, and excretes a lesser percentage of morphine in the bile.

NUMBER 01931
Mitchell, C.L.
A Comparison of Drug Effects Upon the Jaw Jerk Response to Electrical Stimulation of the Tooth Pulp in Dogs and Cats.
J.Pharmacol. and Exptl.Therap. 146:1-6,1964.
Both morphine and chlorpromazine elevate threshold voltage required to elicit a response to single shock stimulation of the tooth pulp in cats.

NUMBER 01932
Welch, R.M.
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Burns, J.J.
The Metabolism of Acetophenetidin and N-Acetyl-p-Aminophenol in the Cat.
Biochem.Pharmacol. 15:521-531,1966.
Acetophenetidin, an analgesic-antipyretic drug of the coal tar group, was studied in cats. The data indicate that this drug would not be desirable for therapy in cats because of its propensity to produce methemoglobinemia. The cats excreted a higher percentage of primary aromatic amines than either dog or man.

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Schafer, E.A.
Description of a Mammalian Ovum in an Early Condition of Development.
Proc.Oy.Soc., vol.24,1875-1876.
Possibly the first account of the structure of the cat's blastocyst. Described as possessing a bilaminar embryonal

area one-sixtieth of an inch (0.4 mm) in diameter.

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Bonnet, R.
The Embryology of the Dog.
Anat.Hefte, 1 Abt., Heft 28-30, Bd. 9,1897.
In this treatise on the development of the dog, the author describes and shows drawings of 3 eggs of the cat, one unfertilized, a second with 2 pronuclei, and a third divided into 9 blastomeres of unequal size.

NUMBER 01935

Van Der Stricht, R.
(Vitellogenesis of the Ovum of the Cat.)
Arch.Biol. vol.26,1911.
This paper is primarily concerned with providing a detailed account of the growth of the ovarian ovum, including the process of vitellogenisis in the cat. It also includes chapters dealing with maturation, fertilization, and the early stages of (leavage, though not in detail past the 3-celled stage. It also contains data related to breeding habits, estrus, and ovulation.

NUMBER 01936

Ancel, P.
Bouin, P.
Sur la Fonction du Corps Jaune.
C.R.Soc.Biol. vol.68,1909.
Ovulation in the cat is normally induced by copulation.

NUMBER 01937

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Title Unknown.
Arch.Ges.Physiol.Pfluger's 264:97,1957.
In the unanesthetized cat, changes in brain temperature precipitates peripheral vasomotor states analogous to those triggered by whole body exposure to heat or cold.

NUMBER 01938

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Am.J.Physiol. 197:145,1959.
In the cat, only moderate hypothalamic thermal alterations are necessary to lead to readjustments in net heat balance through modified peripheral vasomotion.

NUMBER 01939

Strom, G.

Title Unknown.
Acta Physiol.Scand. 20:Suppl.70,47,1950.
In the cat, only moderate hypothalamic thermal alterations are necessary to lead to readjustments in net heat balance through modified peripheral vasomotion.

NUMBER 01940
Jasper, H.
Ajmone-Marsan, C.
A Stereotaxic Atlas of the Diencephalon of the Cat.
Nat.Res.Council Can., Ottawa,1954.

NUMBER 01941
Forster, R.E.
Ferguson, T.B.
Title 1nknown.
Am.J.Physiol. 169:255,1952.
Rectal temperature in the cat resting at room temperature is higher than anterior hypothalamic temperature.

NUMBER 01942
Hardy, J.D.
Hammel, H.T.
Nakayama, T.
Title 1nknown.
Science 136:326,1962.
Cells within the area of the anterior hypothalamus in cats preferentially respond with increased discharge frequency to local heating, but not to cooling. There are threshold values given for thermally responding cells within the diencephalon.

NUMBER 01945
Anon.
Etcetera.
Vet.Med./Small Anim.Clin. 67(12):1364,1972.
The pet population in the United States was defined by figures released recently by the Pet Food Institute. According to the report, there are 32.6 million family-owned dogs and 22 million family-owned cats. Of all U.S. households, 23.8 million (38%) own dogs, 12.9 million (20%) own cats, 9.2 million (14%) own other kinds of pets. Among the households that ownd dogs and/or cats, 57% own only dogs, 22% own both cats and dogs, and 21% own only cats. Dog-owning households own and average of 1.4 dogs; cat-owning households, and average of 1.7 cats. Purebred dogs comprise 25% to 30% of the pet-dog population. According to Cats magazine, there are 2,150,000 purebred cats. Some 15,000 catteries sell 375,000 cats each year - most of them as pets.

NUMBER 01946
Ulmer, M.J.
Haupt, R.E.
Hicks, E.A.
Anatomy of the Cat.
Harper and Row, New York, 1971.
An atlas and dissection guide.

NUMBER 01947
Pape, L.G.
Katzman, R.
Response of Glia in Cat Sensorimotor Cortex to
Increased Extracellular Potassium.
Brain Res. 38:71-92,1972.
With the sensorimotor cortex under continuous irrigation with artificial CSF, 40 electrically silent glial cells ranging in membrane potential from - 50 to - 95 mV were studied in the outer 400 micro-m. After penetration of a cell the normal CSF was replaced by a CSF containing 40 mM K+ which flowed until the membrane potential appeared to reach a platean. The 40 mM K+ CSF was then replaced by normal CSF and cell repolarization observed. The response of 10 cells in the outer 30 micro-m provided an accurate index of glial sensitivity to 40 mV K+. Those cells with the highest membrane potential (92 mV) showed the greater depolarization (34 mV). Cells with the lowest membrane potential (50 mV) showed the smallest depolarization (12 mV). The depth of 10 of the glial cells was verified by florescein electrophoresis and ranged from 10 to 380 micro-m. The presence of the arachnoid membrane prolonged the time required to obtain equilibration at various cortical depths. Correlation of the electrophysiologue response of these 10 cells with depth revealed the time course of potassium movement through the brain. A cell 10 micro-m deep reached a plateau in 13 sec while a cell at 380 micro-m took upwards of 114 sec to approximate a plateau. It is concluded that the magnitude of the response of the glial cells to 40 mM K+ is less than what would be predicted by the Nernst equation. The time course of the glial response can be approximated by a diffusion model, corrected for cell and capillary absorption. In addition, the effects of a surface barrier to K+ diffusion have been calculated and discussed.

NUMBER 01948
Karahashi, Y.
Goldring, S.
Intracellular Potentials from 'Idle' Cells in Cerebral
Cortex of the Cat.
Electroenceph.Clin.Neurophysiol. 20:600-607,1966.

NUMBER 01949
Sugaya, E.

Goldring, S.
O'Leary, J.L.
Intracellular Potentials from 'Idle' Cells in Cerebral Cortex of Cats.
Electroenceph.Clin.Neurophysiol. 17:661-669,1964.

NUMBER 01950
Watanabe, S.
Mitari, G.
Takenaka, S.
The Glial Cell in the Cerebral Cortex of the Cat.
Proc.Int.Union Physiol.Sci., 24 Int.Congress, 7:459,1968.

NUMBER 01951
Matsuoka, I.
Domino, E.F.
Cholinergic Modulations of Single Lateral Geniculate Neurons in the Cat.
Neuropharmacology 11:241-251,1972.
The effects of physostigmine, nicotine and scopolamine were studied on the activity of single lateral geniculate neurons in the acute cat. Most of the lateral geniculate neurons selected were P-cells. The increased their responses to ipsilateral optic tract and midbrain reticular formation stimulation. Nicotine and physostigmine in doses of 25 micro-g/kg i.v. significantly increased the spontanous firing rate of single geniculate neurons. Scopolamine in a dose of 0.5 mg/kg i.v. depressed their firing rates to control levels. Physostigmine enhance their post-stimulus discharge rate to optic nerve stimulation. This enhancement was depressed by scopolamine. The effects of midbrain reticular formation stimulation were further enhanced by physostigmine and reduced by scopolamine in about 86% of lateral geniculate neurons studied. Generally, the effects of trains of pulses to the reticular formation (250 Hz/sec, 50 msec train duration, 0.05-0.1 msec pulses) were more marked than single stimuli. It is concluded that a major cholinergic facilitatory system exists which influences lateral geniculate neurons. It is postulated that this involves the reticular formation. Evidence is presented fo a predominant muscarinic cholinergic mechanism

NUMBER 01952
Angel, A.
Magni, F.
Strata, P.
Excitability of Intra-geniculate Optic Tract Fibres After Reticular Stimulation in the Mid-pontine Pretrigeminal Cat.
Archs Ital.Biol. 103:668-693,1965.

NUMBER 01953
Burren, C.H.
The Behaviour of Brugia Malayi Microfilariae in Experimentally Infected Domestic Cats.
Ann.Tropic Med.Parasitol. 66(2):235-242,1972.
The behaviour of Brugia malayi microfilariae in English-bred domestic cats is described and some of the problems which aroze in working with this host-parasite system are considered. The microfilariae show a 24-hour sub-periodicity with a maximum at 20.00 hours and a minimum at 10.00 hours. They are sensitive to variation of the oxygen tension in air breathed by the host. Splenectomy of cats in which the infection was established did not result in an increased microfilaraemia, although the spleen appears to be an organ in which microfilariae are destroyed.

NUMBER 01954
Edeson, J.F.B.
Wharton, R.H.
The Transmission of Wuchereria Malayi from Man to the Domestic Cat.
Trans.Roy.Soc.Trop.Med.Hyg. 51:366-370,1957.

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Pellett, P.L.
Pascoe, E.
Sha'afi, R.I.
Amino Acid Composition of Cat and Human Erythrocyte Membranes.
Comp.Biochem.Physiol. 41B:483-486,1972.
Amino acid composition of cat and human erythrocyte membranes prepared simultaneously were investigated. No differences in amino acid concentrations were detected in these two species. Cat membranes contained less than one-half of the glucosamine concentration found in human membranes.

NUMBER 01956
Sha'afi, R.I.
Hajjar, J.J.
Sodium Movement in High Sodium Feline Red Cells.
J.Gen.Physiol. 57:684-696,1971.

NUMBER 01957
Sha'afi, R.I.
Lieb, W.R.
Cation Movements in the High Sodium Erythrocyte of the Cat.
J.Gen.Physiol. 50:1751-1764,1967.

NUMBER 01958

Sha'afi, R.I.
Pascoe, E.
Sulfate Flux in High Sodium Cat Red Cells.
J.Gen.Physiol. vol 59,1972.

NUMBER 01959

Brutsaert, D.L.
Claes, V.A.
Donders, J.J.H.
Effects of Controlling the Velocity of Shortening on Force-Velocity-Length and Time Relations in Cat Papillary Muscle.
Circ.Res. 30:310-315,1972.

A new technique - velocity clamping - was used to study the effects of a shortening on the interrelation between force, velocity, length, and time in cat papillary muscle. With decreasing values of clamped total velocity, the duration of the contraction increased but never exceeded the duration of an isometric contraction. Hence these findings confirm that the mode of contraction isometric or isotonic - has a marked effect on the duration of the contraction. The active state can be prolonged when less shortening occurs and more tension is developed. This phenomenon seems mainly due to the amount of shortening rather than to the velocity of shortening of the muscle. The data were also plotted on a three-dimensional graph and compared with velocity-length tracings of afterloaded contractions. The force-length trajectories of the muscle during velocity clamping did not fall on the surface described by the force-velocity-length relations as derived from afterloaded isotonic contractions. This finding could be ascribed to the masking effect of the series eleastic component due to the continuous adjusting of the load.

NUMBER 01960

Brutsaert, D.L.
Sonnenbliok, E.H.
Force-Velocity-Length-The Relations of the Contractile Elements in Heart Muscle of the Cat.
Circ.Res. 24:137-149,1969.

NUMBER 01961

Echols, S.D.
Jewett, R.E.
Effects of Morphine on Sleep in the Cat.
Psychopharmacol. 24:435-448,1972.

The effects of morphine sulfate, 300 micro-g/kg s.c., on the sleep of cats was studied by electroencephalographic techniques. In contrast to placebo experiments the animals were awake for approximately 6 h after administration of morphine; the return of regular sleep patterns occurred after about 11 h. A rebound increase in rapid eye movement (REM) sleep time and percentage was noted during the 11th through the 17th hour of the study. Sleep following manual sleep deprivation for 10 h showed a rebound increase in REM and non-rapid eye movement (NREM) sleep time. NREM sleep rebound after manual sleep deprivation exceeded that occurring after morphine. The alerting actions of morphine could be blocked by naloxone, 100 micro-g/kg s.c., for about 90 min. Naloxone alone increased REM sleep time and percentage. Single (84 mg/kg) or multiple (51 mg/kg for 4 injections) doses of dl-x-methyltyrosine i.p. did not block the alerting action or REM sleep rebound caused by morphine. 5-Hydrotryptophan (30 mg/kg) i.p. did not antogonize the alerting action of morphine.

NUMBER 01962
Dement, W.C.
The Occurrence of Low Voltage, Fast Electroencephalogram Patterns During Behavioral Sleep in the Cat.
Electroenceph.Clin.Neurophysiol. 10:291-296,1958.

NUMBER 01963
Jewett, R.E.
Effect of Promethazine on Sleep Stages in the Cat.
Exp.Neurol. 21:368-382,1968.

NUMBER 01964
King, C.D.
Jewett, R.E.
The Effects of Alpha-methyltyrosine on Sleep and Brain Norepinephrine in Cats.
J.Pharmacol.Exp.Ther. 177:188-195,1971.

NUMBER 01965
Koella, W.
Feldstein, A.
Czicman, J.S.
The Effect of Para-chlorphenylalanine on the Sleep of Cats.
Elecroenceph.Clin.Neurophysiol. 25:481-490,1968.

NUMBER 01966
Sterman, M.B.
Knauss, T.
Lehmann, D.
Clemente, C.D.
Circadian Sleep and Waking Patterns in the Laboratory Cat.
Electroenceph.Clin.Neurophysiol. 19:509-517,1965.

NUMBER 01967
Vimont-Vicary, P.
Jouvet-Mounier, D.
Delorme, F.
Effets EEG et Comporthmentaux des Privations de Sommeil Paradoxal Chez le Chat.
Electroenceph.Clin.Neurophys. 20:439-449,1966.

NUMBER 01968
Osen, K.K.
Prjoection of the Cochlear Nuclei on the 2nferior Colliculus in the Cat.
J.Comp.Neurol. 144(3):355-371,1972.
The present study was carried out in order to define the topographical organization and the cells of origin of the second order auditory fibers terminating in the inferior colliculus. The findings are based on anterograde fiber degeneration studies in Nauta preparations of adult cats following stereotactical lesions of the cochlear nuclei, and on retrograde cell degeneration studies in Nissl sections of kittens following transection of the ascending auditory fiber tracts. Both the dorsal and ventral cochlear nuclei were found to contribute fibers to the central nucleus of the contralateral inferior colliculus in a definite topographical order. The fibers leading to the inferior colliculus from the dorsal cochlear nucleus, undoubtedly originate in the pyramidal cells, while no definite conclusions could be drawn regarding the cells of origin of fibers derived from the ventral cochlear nucleus.

NUMBER 01969
Fernandez, C.
Karapas, F.
The Course and Termination of the Striae of Monakow and Held in the Cat.
J.Comp.Neur. 131:371-386,1967.

NUMBER 01970
Goldberg, J.M.
Moore, R.Y.
Ascending Projections of the Lateral Lemniscus in the Cat and Donkey.
J.Comp.Neur. 129:143-156.1967.

NUMBER 01971
Morest, D.K.
The Laminar Structure of the Inferior Colliculus of the Cat.
Anat.Rec. 148:314,1964.

NUMBER 01972
Osen, K.K.
The Intrinsic Organization of the Cochlear Nuclei in

the Cat.
Acta Oto-laryng. 67:352-359,1969.

NUMBER 01973
Osen, K.K.
Cytoarchitecture of the Cochlear Nuclei in the Cat.
J.Comp.Neur. 136:453-484,1969.

NUMBER 01974
Osen, K.K.
Course and Termination of the Primary Afferents in the Cochlear Nuclei of the Cat: An Experimental Anatomical Study.
Arch.Ital.Biol. 108:21-51,1970.

NUMBER 01975
Rose, J.E.
Galambos, R.
Hughes, J.R.
Microelectrode Studies of the Cochlear Nuclei of the Cat.
Bull.John Hopk.Hosp. 104:211-251,1959.

NUMBER 01976
Warr, W.B.
Fiber Degeneration Following Lesions in the Anterior Ventral Cochlear Nucleus of the Cat.
Exp.Neurol. 14:453-474,1966.

NUMBER 01977
Warr, W.B.
Fibre Degeneration Following Lesions in the Posteroventral Cochlear Nucleus of the Cat.
Exp.Neurol. 23:140-155,1969.

NUMBER 01978
Okamura, H.
Virutamasen, P.
Wright, K.H.
Wallach, E.E.
Ovarian Smooth Muscle in the Human Being, Rabbit, and Cat.
Am.J.Obstet.Gynecol. 112(2):183-191,1972.
The nature and distribution of smooth muscle cells in the ovaries of the cat, rabbit, and human being were investigated by both histochemical and electron microscopic studies. In the human ovary, the typical smooth muscle cells are abundant in both the theca externa of the follicle and the cortical stroma. In the rabbit ovary, smooth muscle cells are concentrated in the cortical stroma rather than in the follicle wall. In the cat ovary, the

smooth muscle cells cannot be considered typical. The characteristic features of the cells are discussed, and the possible role of ovarian smooth muscle in the ovulatory mechanism is suggested.

NUMBER 01979

Clark, W.G.
Alderdice, M.T.
Inhibition of Leukocytic Pyrogen-induced Fever by Intracerebroventricular Administration of Salicylate and Acetaminophen in the Cat.
Proc.Soc.Exp.Biol.Med. 140(2):399-403,1972.

Lateral cerebral ventricular administration of sodium salicylate (0.25-1.00 mg) and acetaminophen (0.50-1.00 mg) significantly inhibited production of fever by LP injected iv in the cat. Acetaminophen also caused mild but significant hypothermia in the absence of fever. The ability of these antipyretics to antagonize fever produced by LP, and by agents such as bacterial pyrogens which release LP, is most likely due primarily to a central action to inhibit the effect of LP rather than to a peripheral action to alter LP release from leukocytes or to inhibit entry of LP into the central nervous system.

NUMBER 01980

Clark, W.G.
Moyer, S.G.
Title Unknown.
J.Pharmacol.Exp.Ther. 181:183,1972.

In the cat, an intravenous injection of sodium salicylate will inhibit the pyrogenic activity of leukocytic pyrogen given intravenously.

NUMBER 01981

Meloan, S.N.
Puchtler, H.
Valentine, L.S.
Alkaline and Acid Alizarin Red S Stains.
Arch.Path.93 :190-197,1972.

Effects of the pH of alizarin red S solutions on the demonstration of alkali-soluble and alkali-insoluble calcium deposits were investigated. Parafin sections of tissues fixed in absolute alcohol, Carnoy's fluid, methanol, chloroform, and glacial acetic acid in a 6:3:1 volume to volume ratio (Methacarn), formaldehyde solution (10% unbuffered formalin), or Zenker-formaldehyde solution (Zenker-formol) were stained in 0.5% aqueous solutions of alizarin red S buffered to pH 4.5 to 9.4 for five minutes to one hour. Optimal staining of alkali-soluble calcium deposits was obtained at pH 8.8 to 9.4 and of alkali-insoluble calcium deposits at pH 6.5 to 7.1. Absolute alcohol, Carnoy's fluid, and Methacarn preserved calcium deposits equally well, but 10% unbuffered formaldehyde solution and Zenker-formaldehyde solution removed significant amounts of calcium. The different staining properties of calcium deposits indicate conversion of amorphous calcium phosphates into apatite-like compounds. However, alizarin red S is not specific for calcium but can react with a wide variety of cations.

NUMBER 01982
Jordan, L.M.
Willis, W.D., Jr.
Matthews, M.A.
Effects of Para-methoxyphenylethylamine on Reflexes and Motoneurons in the Cat Lumbar Spinal Cord.
J.&harmacol.Exptl.Therap. 181(1):53-64,1972.

The work of Walker, et al. who showed that i.v. injections of para-methoxyphenylethylamine (PMPEA) into spinal cats anesthetized with x-chloralose and paralyzed with gallamine triethiode cause increases in monosynaptic reflexes of both flexor and extensor motoneurons, has benn confirmed in the present investigation. The action of PMPEA on the flexion reflex has been studied with the same preparation. The drug may cause an increase, a simple decrease or a decrease after a transient increase in the size of the flexion reflex. The actions of PMPEA on monosynaptic and flexion reflexes in unanesthetized preparations were similar to those in chloralose-anesthetized animals. PMPEA consistently depolarized the membrane potentials of motoneurons in the lumbar enlargement. The mean depolarization was 8.1 mV, and the time course of the depolarization was similar to the time courses of the reflex changes caused by PMPEA. Polysynaptic excitatory postsynaptic potentials (EPSPs) and inhibitory postsynaptic potentials recorded from motoneurons were reduced in amplitude during the action of PMPEA, and the time course of the reduction in each case was similar to the period during which the resting potential was depolarized and the reflexes altered by the drug. Amplitudes of monosynaptic EPSPs recorded from motoneurons were not changed in any consistent manner by PMPEA. It is concluded that the depolarization of motoneurons, coupled with the lack of change in amplitude of the monosynaptic EPSP, accounts for the increase in the monosynaptic reflex by PMPEA, whereas the reduction in polysynaptic EPSPs, in combination with the depolarization of motoneurons, accounts for the variable changes in the flexion reflex produced by this drug.

NUMBER 01983
Anderson, E.G.
Holgerson, L.O.
The Distribution of 5-Hydroxytryptamine and Norepinephrine in Cat Spinal Cord.
J.Neurochem. 13:479-485,1966.

NUMBER 01984
Easton, T.A.
Patterned Inhibition from Single Eye Muscle Stretch in the Cat.
Exp.Neurol. 34:497-510,1972.
The present study was undertaken to determine in more detail the nature of the apparent postural reflexes relating eye muscle stretch to the rest of the skeletal musculature. It was found, using the method of response tallying that, with the cat level, 40-g stretch of the inferior rectus elicited a pattern of inhibition which might tend to favor forelimb flexion, of the superior rectus forelimb extension, and of the horizontal recti a turn of the head and neck away from the direction of gaze and a decrease in the tone of the forelimb opposite the direction of gaze. With the head up, the same pattern of response appeared to hold, though stretch of the superior rectus had no distinctly patterned effect, and the most inhibited limb muscle changed from the left neck, with the cat level, to the left biceps. With the head down, stretch of the inferior rectus seemed to favor forelimb flexion, but stretches of the superior and horizontal recti had little distinct effect. The receptors responsible for the inhibition were localized by control experiments within the extraocular muscles. These responses are of the same sort as those evoked by vestibular stimulation by whole-body tilt and suggest that oculovestibular effects are bidirectional.

NUMBER 01985
Van Hasselt, G.
The Effects of Ablation of Visual Cortical Areas on the CFF of the Electroretinogram of the Cat.
Ophthal.Res. 3:160-165,1972.
The effect of ablation of visual cortical areas on the electroretinographic critical flicker fusion frequency (CFF) was studied in unanaesthetized, paralysed cats. Bilateral ablation of the visual area of the suprasylvian sulcus severely depressed the photopic part of the CFF curve, while leaving the scotopic part unaltered. Bilateral ablation of the striate, parastriate and peristriate areas did not have any influence on the CFF curve. The visual area in the suprasylvian sulcus is considered to play a crucial role in the system of centrifugal control of retinal function. The possibility of a homologous area in the monkey and human brain is discussed.

NUMBER 01986
Van Hasselt, P.
Effects of Ablation of Visual Cortical Areas and Optic Nerve Section upon the Double-Flash Electroretinogram of the Cat.
Ophthal.Res. 3:83-94,1972.
In order to elucidate the involvement of visual cortical

areas in the centrifugal influences upon the retina, the effect of bilateral ablation of these brain areas upon the double-flash electroretinogram (ERG) was investigated in unanaesthized, paralysed cats. The intervals between conditioning flash and test flash were 0.10, 0.22, 0.47, 1.00, 2.20, 4.70 and 10 sec. Bilateral ablation of the visual area of the suprasylvian sulcus appeared to depress significantly a certain interval of the recovery cycle of the b-wave. This interval included 0.22 and 0.47 sec. The maximum effect was at 0.22 sec. At 0.10 and at 1.00 sec and above the ablation had no effect. The recovery cycle of the a-wave was affected at none of the intervals. Additional section of the optic nerves revealed no further effect. Bilateral ablation of the striate, parastriate and peristriate areas had no effect upon the recovery cycle of the a- and b-waves of the ERG. The amplitude of the ERG of the conditioning flash was affected by neither the ablations nor optic nerve sections. These results indicate that in intact cats after a conditioning flash there is a short-acting centrifugal influence upon the retinal sensitivity, as appears from the increase of part of the recovery cycle of the b-wave of the ERG. The cortical origin of this effect appeared to be the visual area of the suprasylvian sulcus. This effect is interpreted in terms of selective attention. The possible role and significance of the centrifugal influences upon the retina is discussed.

NUMBER 01988
Ghoshal, N.G.
The Arteries of the Pelvic Limb of the Cat (Felis Domesticus).
Zbl.Vet.Med.A. 19:78-85,1972.
The major arterial blood supply to the pelvic limb of the cat is described from a comparative standpoint and some of the discrepancies in the literature are indicated. The findings are limited to the essential characteristics of the major vessels which are presented by composite illustrations.

NUMBER 01989
Dallman, M.J.
Anatomy and Nomenclature of Muscles and Arteries in the Domestic Cat.
M.S. Thesis, Library, Univ. of Missouri, Columbia, Misourri.

NUMBER 01990
Dubey, J.P.
Frenkel, J.K.
Cyst-Induced Toxoplasmosis in Cats.
J.Protozool. 19(1):155-177,1972.
The life cycle of Toxoplasma gondii is described from cats orally inoculated with Toxoplasma cysts. Five new

structural stages of Toxoplasma designated as "types" A-E were found in the epithelial cells of the small and large intestine. Type A is the smallest of all 5 intestinal Toxoplasma types. It occurs as collections of 2-3 organisms in the jejunum 12-18 hr after infection. Type B organisms are characterized by a centrally located nucleus, a prominent nucleolus and dark blue cytoplasm giving rise to the appearance of bipolar staining with GIEMSA. Type B occurs 12-54 hr after infection and appears to divide by simple endodyogeny and by multiple endodyogeny (endopolygeny). Type C organisms are elongate with subterminal nuclei and strongly PAS-positive cytoplasm. They occur at 24-54 hr and divide by schizogony. Type D organisms are smaller than type C and contain only a few PAS-positive granules. They occur from 32 hr to 15 days after inoculation and account for over 90% of all parasites in the small intestine during this time. Three subtypes divide by endodyogeny, schizogony and by splitting of their merozoites from the main nucleated mass without leaving a residual body. Type E organisms resemble one of the subtype D which divide by schizogony, but they leave a residual body. They occur from 3-15 days after inoculation. Gametocytes occur thruout the small intestine but more commonly in the ileum 3-15 days after infection. Male gametocytes contain on an average of 12 microgametes and comprise 2-4% of the gametocyte population. The prepatent period after cyst-induced infection is 3-5 days with the peak oocyst production between 5-8 days and a patent period varying from 7-20 days. Variable numbers of trophozoites are present in the lamina propria of the small intestine and in the extra-intestinal tissues within a few hr after inoculation. After 9-10 days cysts were seen in the heart and later in the brain. The lesions of toxoplasmosis are compared in newborn and weanling kittens and in adult cats after oral and subcutanecus inoculation with cysts. After the ingestion of cysts, newborn kittens developed enteritis, hepatitis, myocarditis, myositis, pneumonitis and encephalitis and were moribund by the 9th day. Kittens aged 2 weeks and older developed enteritis, myocarditis, encephalitis and myositis but often survived; adult cats usually remained asymptomatic. After subcutaneous inoculation of cysts, newborn and weanling kittens died of acute toxoplasmosis with severe pneumonia, myocarditis, encephalitis and hepatitis.

NUMBER 01991

Barkai, A.
Glusman, M.
Rapport, M.M.
Serotonin Turnover in the Intact Cat Brain.
J.Pharmacol.Exptl.Ther. 181(1):28-35,1972.

A new method of studying serotonin turnover in the brain that does not require assay of brain tissue is described: turnover is estimated from the rate of appearance of endogenous 5-hydroxyindoleacetic acid in the perfused cerebrospinal fluid compartment. Studies of the effects of reserpine and probenecid on the rate of appearance in the anesthetized cat showed that reserpine caused an increase of about 50% in the rate of appearance whereas probenecid did not affect the rate of appearance under conditions where removal of 5-hydroxyindoleacetic acid from the perfusate was inhibited. The perfusion method is suitable for studying changes in turnover in the same animal under various experimental conditions.

NUMBER 01992
Carmichael, E.A.
Feldberg, W.
Fleischhauer, K.
Methods for Perfusing Different Parts of the Cat's
Cerebral Ventricles.
J.Physiol.(London) 173:354-367,1964.

NUMBER 01993.
Sheard, M.H.
Zolovick, A.J.
Serotonin: Release in Cat Brain and Cerebrospinal
Fluid on Stimulation of Midbrain Raphe.
Brain Res. 26:455-458,1971.
The physiological concentration of
5-hydroxyindoleacetic acid in the cerebrospinal fluid of the
cat is 109+/-22 nanograms/ml.

NUMBER 01994
Berndt, J.
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Berger, K.
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(Studies on the Central Chemsensitive Mechanism of
Respiration. IV. Observations in Anesthetized and in
Decerebrate Cats.)
Pflugers Arch. 332:184-197,1972.#
The ventilatory response to changes in the extracellular
pH in the medullary tissue was studied in decerebrate and
in anesthetized cats.

NUMBER 01995
Florez, J.
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Effects of Central Depressant Drugs on Respiratory
Regulation in the Decerebrate Cat.
Respir.Physiol. 6:318-329,1969.

NUMBER 01996
Henry, J.L.
Calaresu, F.R.

Distribution of Cardioacceleratory Sites in the
Intermediolateral Nucleus of the Cat.
Am.J.Physiol. 222(3):700-704,1972.

In 20 adrenalectomized cats with bilateral vagotomy and spinal transection at c7 selective electrical stimulation of the thoracolumbar intermediolateral nucleus (ILN) on the right side of spinal segments t1 to mid-t8 elicited cardioacceleration and arterial hypertension at 84 histologically verified sites. These responses were not affected by administration of gallamine triethiodide (5 mg/kg). Administration of propranolol abolished the cardioacceleratory but not the arterial hypertensive response. Stimulation of the ILN on the left side elicited changes in heart rate and arterial pressure which were significantly smaller than those obtained by stimulation on the right. Maximum cardioacceleration was obtained at a stimulus frequency of 25 Hz, maximum arterial hypertension at a stimulus frequency of 20 Hz. The greatest change in the cardioacceleratory response for a change in stimulus frequency occurred in the range 0-5 Hz; the greatest increase in mean arterial pressure for a change in frequency occurred between 0 and 20 Hz. It is concluded that the responses observed were due to direct activation of sympathetic preganglionic neurons in the spinal cord and that cardioacceleratory neurons in the ILN are located between segments t1 and mid-t8.

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Boehm, R.
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(Studies of the Nervus Accelerator Cordis of the Cat.)
Arch.Exptl.Pathol.Pharmakol. 4:255-279,1875.

NUMBER 01998
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The Mechanism of the Cardioacceleration Elicited by
Electrical Stimulation of the Parahypoglossal Area in
the Cat.
J.&hysiol.(6ondon) 210:107-120,1970.

NUMBER 01999
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Electrical Activity of Efferent Vagal Fibres and
Dorsal Nucleus of the Vagus During Reflex
Bradycardia in the Cat.
J.&hysiol.London 176:228-240,1965.

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Waddell, K.C.

K-Strophanthidin Emesis in Cats with Denervated
Hearts. The Seat of its Action.
J.Pharmacol.Exp.Therap. 29:9-39,1926.

NUMBER 02010
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Vet.Rec. 75:417-422,1963.
The presence of Aelurostrongylus abstrusus infestation and the resultant medial hypertrophy of pulmonary arteries may sometimes result in hypertension and hydrothorax.

NUMBER 02011
Brion, A.
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Rev.Vet.Med. 93:145-157,1942.
Some cases of pleurisy with granules in the pus that occurred in cats were due to the "necrosis bacillus".

NUMBER 02012
Prevot, A.R.
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Joubert, L.
Tardieux, P.
Aladame, N.
Title Unknown.
Annls.Inst.Pasteur, Paris 81:85-88,1951.
The authors reported actinomycosis-type lesions, occasionally involving the pleura of the cat, associated with an organism which he called Fusocillus girans.

NUMBER 02013
Prevot, A.R.
Joubert, L.
Goret, P.
Title Unknown.
Annls.Inst.Pasteur,Paris 101:771-792,1961.
The authors report on the bacteriological examination of "pseudo-actinomycosis" which represented 95% as subcutaneous abscesses containing rice-like granules, occasionally accompanied by pleurisy. In nearly all cases mixtures of fuso-bacteria, anaerobic cocci, and aerobic streptococci and Pasteurella, with or without the presence of Treponema, were found. They described a long, gram-positive filamentous organism which was non-culturable.

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Wilkinson, G.T.
Gibbons, J.
Title Unknown.
Vet.Rec. 72:903,1960.

Description of a case of unilateral pleurisy in the cat that responded to drainage of the offensive red fluid, and the use of antibiotics locally and parenterally.

NUMBER 02015
Carroll, E.J.
Sedgwick, C.J.
Schalm, O.W.
Title Unknown.
Am.J.Clin.Path. 1:115-121,1967.
Normal feline serum protein analyses are:serum protein, 7.1 gm%: albumin, 42.1%; alpha globulin, 15.1%; beta globulins, 15.2%; gamma globulins, 27.6%.

NUMBER 02016
Jubb, K.V.F.
Kennedy, P.J.
Pathology of Domestic Animals.
Academic Press, New York, 1963.
State that peritonitis was rare in the cat, except as a sequel to uterine rupture in pyometra or fetal putrefaction.

NUMBER 02017
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Title Unknown.
Cornell Vet. 53:157,1963.
Describes chronic fibrinous peritonitis as "a peculiar entity with a definite predilection for cats".

NUMBER 02018
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Griesemer, R.A.
Title Unknown.
Path.Vet. 3:225,1966.
The authors describe the clinical and pathological findings in 16 cats with diffuse peritonitis in which the grey fibrinous exudate was thickest on the serosa of the liver and spleen. They named the condition "feline infectious peritonitis", were unable to demonstrate a causal organism, but were able to transmit the disease to germ-free and conventional cats.

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Bull. Acad.Vet.Fr. 33:361,1960.
Description of 3 cases of splenomegaly in the cat in which the splenic pulp was infltrated with mast cells.

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Ehinger, B.
Double Innervation of the FelineIris Dilator.
Arch.Ophthal. 77:541-545,1967.
Using histochemical techniques for acetylchlinesterase and the adrenergic freeze-dry flourescence method to demonstrate adrenergic and chlinergic fibres, the cat and other species were examined. The autors noted the presence of cholinesterase activity of a significant degree in both dilator and sphincter muscle of the iris as wll as a small but reproducible adrenergic fluorescence in the dilator muscle.

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The Constrictive Action of Acetazolamide on the Iris Arteries of the Cat.
Arch.Ophthal. 66:570-577,1961.

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Fagg, R.H.
Osteodystrophy in Siamese Kittens.
Vet.Rec. 71:707,1959.

NUMBER 02023
Hill, R.R.
The Role of the Diet in the Development of Osteogenesis Imperfecta in the Cat.
Auburn Vet. 13:57,1962.

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Arterial Blood Acid-base Balance in Unrestrained Waking Cats.
Proc.Soc.Esp.Biol.Med. 112:328-330,1963.
The normal resting alveolar and arterial P subscript CO-2 is 30 mm Hg.

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Organization of Tactile Dermatomes in Cat and Monkey.
J.Neurophysiol. 16:169-182,1953.

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J.Genet. 49:214-220,1949.

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Lausanne, Rouge, 1949.

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An Atlas of the Chromosome Numbers in Animals.
Iowa State College Press, Ames, 2nd edition, 1951.

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Nuclear Morphology, According to Sex, in Nerve Cells of Several Species and in Various Organs of the Cat.
Anat.Rec. 109:403-404,1951.

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Anat.Rec. 112:709-718,1952.

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Incidence of the Genes for Coat Color in Japanese Cats.
Annot.Zool.Japanenses 25:209-211,1952.

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A Study of Variation in Singapore Cats.
J.Genet. 56:111-128,1959.

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Spontaneous Occurrence of Chromosomal Abnormality in Cats.
Science 135:554-555,1961.

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A Pink-Eyed Dilution in the Cat.
J.Hered. 52:202,1961.

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XO and XXY Karyotypes in Cats?
Lancet 1:1304,1962.

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Inheritance of the Catnip Response in Domestic Cats.
J.Hered. 53:54-56,1962.

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Accessory Nuclear Lobule on the Polymorphonuclear
Neutrophil Leukocyte of Domestic Animals.
Acta Cytol. 7:346-350,1963.

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Penotypic Variability of Taillessness in Manx Cats.
J.Hered. 54:167-169,1963.

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Independent Assortment of Manx and Three Coat Color
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The Lyon Hypothesis.
J.Pediatrics 65:765-775,1964.

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The Origin and Genetic Significance of the Red
Abyssinian Cat.
J.Cat Genet. 1:23-25,1964.

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J.Heredity 55:225-230,1964.
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Proc.Roy.Soc.B 162:147-170,1965.

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Vet.Med. 60:705,1965.

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The Independent Assortment of Dominant White and
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Corticosteroid preparations and their uses are examined in the context of small animal practice. The various types of preparations are discussed under 2 main headings: topical and parenteral administration. Indications for injections. tablets, ointments, lotions and drops are enumerated.

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Title Unknown.
Amer.J.Vet.Res. 27:1127,1966.
A description of a rapid staining technique for Anaplasma, which can be used for identifying feline infectious anemia in cats' blood.

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Recl.Vet.Med. 142:1163,1966.
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Vet.Rec. 84:333-335,1969.
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Viral Espiratory Disease.
Vet.Rec. 84:335-338,1969
A discussion of viral rhinotracheitis, picornovirus infection and "cat flu" syndrome of cats.

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Feline Viruses. 1. Characterisation of Four Isolates and their Effect on Young Kittens.

Cornell Vet. 58:248,1968.

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Lindt, S.
Freudiger, U.
Enzootischer, Virus-bedingter Katzenshnupfen in einem Tierheim. 2-mitteilung: Virologischer und Experimenteller Teil I
Zbl.Vet.Med. 11:110,1964.

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A Description of Eight Feline Picornaviruses and an Attempt to Classify Them.
Proc.Soc.Exp.Biol.Med. 126:240,1968.

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Feline Viral Rhinotracheitis in Britain.
Vet.Rec. 79:188,1968.

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Feline Influenza.
Vet.Rec. 75:86,1963.

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Further Observations on Feline Viral Rhinotracheitis.
Vet.Rec. 81:686,1963.

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Vet.Rec. 79:729,1966.

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Vet.Rec. 84:338-340,1969.
A review of panleucopenia.

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Persistent Right Aortic Arch in the Cat.
Vet.Rec. 72:91-92,1960.

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First Report of Neonatal Endocardial Fibroelastosis in Cats and Dogs.
J.A.V.M.A. 133:271-274,1958.

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Persistent Right Aortic Arch in the Cat Causing Esophageal Stenosis.
Vet.Rec. 72:46,1960.

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Experimental Median Hypertrophy and Hyperplasia of Cat's Pulmonary Arteries.
Arch.Path. 61:239-244,1956.

NUMBER 02121
English, P.B.
Seawright, A.A.
Title Unknown.
Austral.Vet.J. 40:376,1964.
Phenylbutazone dosage for the cat is 12-16 mg/kg body weight orally twice daily.

NUMBER 02122
Wilson, G.S.
Miles, A.A.
Topley and Wilson's "Principles of Bacteriology and Immunity", 5th edit., E. Arnold, London, 1964.
The cat is peculiarly insusceptible to anaphylactic sensitization.

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Klaus, G.
Title Unknown.
Vet.Rec. 77:1235,1965.
Described the occurrence of idiopathic pulmonary edema in a Siamese cat and reviewed comparable cases recorded by others. Suspects that the cat is insusceptible to anaphylactic sensitization.

NUMBER 02124
McCusker, H.B.
Aitken, I.d.
Title Unknown.
J.Path.Bact. 91:282,1966.
Report of 2 cases of anaphylaxis in cats during immunological experiments.

NUMBER 02125
Aitken, I.D.
Olafsdottir, E.
McCusker, H.B.
Title Unknown.
Res.Vet.Sci. 8:234,1967.
Anaphylactic shock in cats.

NUMBER 02126
McCusker, H.B.
Aitken, I.D.
Title Unknown.
Res.Vet.Sci. 8:265,1967.
Feline anaphylaxis.

NUMBER 02127
Brodie, T.G.
Title Unknown.
J.Physiol(London) 26:48,1900-01.
Cats are very susceptible to toxic reactions immediately following primary intravenous injection of homologous or heterologous serum. Amounts of serum ranging from 0.1 to 10.0 ml induces cardiac slowing and fall in blood pressure, and death in many instances. The author considered these effects largely due to vagal reflex.

NUMBER 02128
Ponder, E.
Title Unknown.
Q.J.Exp.Physiol. 18:133,1928.
Fifty % of sera investigated was toxic for cats.

NUMBER 02129
Gilding, H.P.
Nutt, M.E.
Title Unknown.
J.Physiol.(London) 102:446,1943.
A detailed study which established that the toxic reaction to serum in cats was accompanied by a peripheral leukopenia, followed some hours later by a leucocytosis. Serum had to be stored for 3 to 4 weeks before it acquired toxicity, and salt fractionation studies indicated that toxicity was associated with a non-dialysable component in an "albumin" fraction, having less than 10% of the original protein of serum. Toxic effects could be largely abolished by vagotomy or atropine.

NUMBER 02130
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Title Unknown.
J.Exp.Med. 111:441,1960.
Certain sera have the capability to support passive cutaneous anaphylaxis in the cat.

NUMBER 02131
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Title Unknown.
Vet.Rec. 81:709,1967.
Accounts of naturally-occurring feline food allergies accompanied by skin changes and alimentary disturbances are reported.

NUMBER 02132
McElvain, S.M.
Bright, R.D.
Johnson, P.R.
Title Unknown.
J.Amer.Chem.Soc. 63:1558,1941.
The cat exhibits an olfactory response to the methyl-cyclopentane monoterpenoid cis,trans-nepetalactone.

NUMBER 02133
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Title Unknown.
Amer.J.Vet.Res. 22:1030,1961.
Eight of 155 cases of neoplasia in cats were meningiomas.

NUMBER 02134
Rich, L.J.
Kirk, R.W.
The Relationship of Struvite Crystals to Urethral

Obstruction in Cats.
J.A.V.M.A. 154(2):153-157,1969.
Struvite crystals were observed in normal feline urine samples with a pH as low as 6.0. There seemed to be no difference in the concentration of struvite crystals from cats with or without urethral obstruction. Many urine samples from cats with obstructions contained few crystals. Neither struvite crystals nor bacterial infections were found to be important causes of urethral obstruction in cats. Hematologic values in cats with urethral obstruction varied little from normal values. The proteinuria and glucosuria which appeared in the urine of some cats with urethral obstruction was a result of hemorrhage into the urinary system.

NUMBER 02135
Battershell, D.
Garcia, J.P.
Polycystic Kidney in a Cat.
J.A.V.M.A. 154(6):665-666,1969.
A report of a 3-year old male cat with a polycystic kidney which contained 570 ml of fluid. The kidney was excised.

NUMBER 02136
Lucke, V.M.
Renal Disease in the Domestic Cat.
J.Clin.Bact. 95:67-97,1968.

NUMBER 02138
Savitsky, A.
Meyer, L.M.
The Bone Marrow of Normal Cats.
J.Lab.Clin.Med. 32:70-75,1947.
A method for aspiration of bone marrow from the iliac crest of the cat is described. Marrow smears of 15 normal cats, with 500 cells differentiated, are reported.

NUMBER 02139
Coop, M.C.
A Treatment for Osteogenesis Imperfecta in Kittens.
J.A.V.M.A. 132:299-300,1958.

NUMBER 02140
Sprya, C.M.
Widdowson, E.M.
The Effect of Growth and Developement on the Composition of Mammals.
Brit.J.Nutr. 4:332,1950.
Data on the effect of growth from birth to maturity on the body composition of cats with respect to protein, water, fat, Na, K, Ca, Mg, P, Fe, Cu, and Mn.

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02120 02121 02122 02123 02124 02125 02126 02127
02128 02129 02130 02131 02132 02133 02134 02135
02136 02138 02139 02140
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02101 02102 02103 02104 02105 02107 02116 02134
02135 02138
COLON, RECTUM, AND ANUS
00034 00884 00951 00955 01582 01857 01868 01941
COLONIES, COMMERCIAL
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01857
COLONIES, RESEARCH
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00059 00060 00061 00065 00066 00067 00069 00070
00071 00075 00076 00087 00088 00094 00095 00106
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00878 00881 00882 00884 00885 00890 00893 00897
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01856 02077
COLONY BEHAVIOR
00006 00046 00047 00048 00059 00066 00067 00071
00075 00095 00119 00120 00168 00847 00874 01003
01258 01754 01766 01966 02096

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COLONY BREEDING
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00912 00932 01003 01004 01005 01006 01026 01097
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02069 02080 02082

COLONY CLEANING
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COLONY COSTS
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COLONY DISEASES
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00862 00882 00884 00904 00911 01003 01097 01258
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COLONY EQUIPTMENT
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COLONY NUTRITION
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01622 01627 01661 02139

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01598 01661

COLONY RECORDS
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01258

COLONY SOURCES
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DERMATOLOGY
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DEVELOPMENT-POSTNATAL
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01858 01864 01865 01866 01893 02079 02140
DEVELOPMENT-PRENATAL
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00189 00190 00201 00215 00234 00267 00289 00293
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00883 00901 00907 00908 00910 00943 00961 00991
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01903 01990 02000 02131
DIGESTIVE-SECRETORY
00105
DOG
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01914 01915 01916 01918 01919 01920 01921 01922
01923 02097
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00868 01815
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00945 00990 01008 01214 01215 01495 01578 01623
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00074 00076 00098 00100 00106 00121 00124 00132

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02116 02122 02126 02127 02140

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02135

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01484 01782 02139

GERM
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00918 00919 00929 00932 00939 01005 01026 01269

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01936 01978 02094 02095 02096

HAIR
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HEART
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01402 01413 01509 01519 01547 01557 01558 01559
01560 01571 01580 01582 01604 01627 01628 01632
01633 01634 01662 01663 01678 01743 01763 01765
01775 01784 01785 01786 01787 01788 01789 01790

PHYSIOLOGY (CONT.)
01791 01792 01793 01802 01814 01815 01822 01882
01886 01888 01889 01890 01891 01892 01896 01898
01899 01900 01901 01924 01925 01926 01927 01929
01941 01955 01956 01957 01958 01959 01960 01978
01983 01984 01991 01992 01993 01994 01996 01997
01998 02020 02024 02025 02085 02124 02125 02126
02127 02128 02129 02130 02131 02134

PITUITARY
00080 00115 00289 00313 01936

PLACENTA
00184 00189 00190 00314 00872 00913 00996 00997
00998 00999 01000 01050 01051 01214 01215 01263
01264 01266 01268 01269 01270 01271 01272 01273
01274 01304 01305 01306 01308 01309 01310 01311
01312 01580 01646 01647 01648 01649 01767 01768
01769 01770 01891 01897 01898 01899 01900 01901

PRE-IMPLANTATION
00030 00106 00107 00184 00189 00190 00867 00873
01002 01264 01265 01269 01307 01580 01933 01934
01935

PRIMATES
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01131 01162 01298 01301 01579 01589 01924 02025

PUBLIC HEALTH
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00141 00152 00165 00167 00203 00215 00216 00225
00226 00246 00254 00290 00330 00352 00894 00903
00914 00957 00958 00958 00959 01275 01426 01427
01470 01520 01555 01584 01602 01620 01664 01665
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01686 01696 01699 01738 01797 01816 01856 01863
01868 01945 01953 01954 01990

RADIOGRAPHY AND ISOTOPES
00009 00050 00051 00065 00068 00100 00106 00128
00135 00151 00154 00156 00166 00195 00206 00215
00216 00225 00304 00323 00326 00333 00335 00344
00356 00357 00869 00876 00888 00896 00898 00901
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RANDOM-SOURCE
00001 00004 00012 00013 00016 00023 00029 00040
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00131 00138 00221 00224 00226 00231 00233 00237
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00874 00875 00877 00879 00880 00881 00884 00886
00888 00897 00898 00899 00903 00904 00914 00950
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01665 01666 01667 01668 01686 01701 01704 01738
01791 01792 01817 01852 01853 01854 01859 01863

RESPIRATORY
00009 00044 00053 00130 00135 00175 00177 00228
00233 00254 00323 00334 00858 00862 00881 00904

RESPIRATORY (CONT.)
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01783 01791 01792 01800 01857 01862 01994 01995
02011 02012 02013 02014 02024 02107 02111 02113
02114 02115 02123
RODENTS, OTHER
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00167 00195 00196 00223 00227 00245 00315 00349
00867 00871 00873 00907 01092 01099 01217 01503
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01891
SALIVARY GLANDS
00001 00004 00079 00159 00944 00986 01117 01280
01509 01670 01861
SEXUAL BEHAVIOR
00012 00043 00046 00047 00048 00059 00065 00071
00075 00080 00113 00115 00119 00155 00161 00168
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01762 01763 01764 01924 01925 01926 01927 01935
02096
SINGULAR CLINICAL OBSERVATION
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00092 00097 00204 00276 00309 00341 00357 00358
00359 00848 00849 00876 00877 00896 00905 00906
00935 00936 00946 00947 00948 00950 01054 01181
01253 01339 01340 01341 01342 01343 01345 01346
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01358 01359 01367 01368 01369 01370 01371 01372
01373 01374 01376 01377 01378 01379 01381 01382
01383 01386 01387 01388 01389 01420 01465 01466
01468 01473 01485 01523 01524 01526 01550 01581
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02014 02124 02131 02135
SKIN
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01846 02025 02131
SKIN AND ADNEXA
00003 00017 00027 00036 00043 00082 00088 00098
00110 00226 00324 00337 00339 00345 00870 00882
00939 01011 01057 01058 01059 01060 01078 01083
01317 01461 01462 01463 01464 01543 01552 01586
01588 01684 01687 01700 01712 01812 01813 01855
01862 02086 02130 02131
SMALL INTESTINE
00011 00013 00028 00034 00108 00112 00116 00203
00254 00290 00345 00352 00848 00859 00885 00951
00959 01228 01233 01350 01351 01356 01363 01366
01444 01449 01452 01470 01674 01685 01686 01698
01699 01706 01779 01787 01840 01890 01893 01903

SMALL INTESTINE (CONT.)
01990 02116 02131
SPINAL CORD AND NERVES
00001 00018 00024 00037 00084 00093 00111 00238
00252 00296 00327 00329 00844 00847 00865 00879
00880 00883 00886 00891 00895 00897 00899 00941
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01668 01688 01693 01765 01781 01798 01813 01930
01931 01937 01938 01939 01968 01982 01983 01993
01997 01998 02020 02025 02080 02081 02082 02132
SPLEEN
00092 00148 00149 00151 00156 00157 00158 00163
00165 00236 00263 00292 00325 00845 00877 00978
01339 01340 01341 01355 01357 01359 01362 01365
01367 01369 01374 01381 01383 01389 01510 01516
01574 01688 02018 02019
STOMACH
00014 00034 00050 00101 00103 00105 00108 00112
00116 00203 00344 00881 00948 00951 01525 01526
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SUPPORTING TISSUES
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00152 00153 00154 00202 00206 00211 00217 00234
00239 00304 00311 00313 00315 00317 00326 00332
00333 00850 00869 00885 00888 00892 00893 00906
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02076 02081 02106 02121 02139
SURGERY AND TECHNICS
00005 00009 00023 00024 00050 00053 00118 00137
00147 00160 00162 00166 00176 00177 00209 00299
00323 00335 00336 00349 00356 00848 00853 00897
00949 00956 00961 01009 01010 01014 01039 01041
01087 01089 01090 01091 01094 01096 01098 01099
01100 01103 01104 01106 01107 01111 01116 01122
01123 01126 01127 01128 01129 01130 01132 01133
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01163 01164 01168 01174 01177 01178 01181 01182
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01192 01194 01195 01196 01199 01200 01201 01202
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02138

TEETH
00021 00064 00065 00341 00844 00881 00972 00973
01009 01931 02053
TENDONS AND LIGAMENTS
00202 00211 00880 00886 00886 01055 01056 01343
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01776 01777 01778 02121
TESTICULAR
00313 00947 01577 01732 01858
THORACIC CAVITY
00121 00135 00137 00323 00344 01133 01144 01181
01482 02010 02011 02012 02013 02014
THYMUS AND LYMPHATICS
00077 00078 00086 00092 00220 00236 00237 00247
00263 00309 00350 00845 00957 01032 01234 01275
01281 01339 01340 01341 01342 01344 01345 01346
01350 01351 01352 01353 01354 01355 01357 01358
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01840 01841
THYROID
00335 00850 00938 00966 00993 01642 01796
TRACHEA, LARYNX, AND BRONCHI
00044 00228 00233 00904 01244 01550 01677 01683
01757
TUMORS AND NEOPLASMS
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00064 00077 00078 00086 00092 00136 00215 00236
00237 00242 00263 00276 00315 00325 00342 00350
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00955 00957 00962 00963 00991 01021 01027 01028
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VIROLOGY
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00247 00263 00287 00330 00894 00904 00917 00944
00945 00953 00957 00989 00990 00991 01229 01276
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01436 01437 01438 01439 01440 01441 01442 01443
01444 01445 01447 01448 01449 01450 01452 01508

VIROLOGY (CONT.)
01665 01666 01667 01668 01670 01671 01683 01684
01689 01690 01696 01697 01698 01779 01780 01793
01800 01839 01840 01842 01843 01861 01871 01872
01873 01874 02108 02109 02110 02111 02112 02113
02114 02115 02116
X-RAYS AND GAMMA RAYS
00002 00064 00091 00100 00106 00140 00141 00159
00206 00215 00216 00856 00879 00887 00955 01019
01291 01551 01856
YOUNG
00013 00029 00033 00039 00040 00041 00056 00057
00065 00068 00069 00070 00071 00076 00086 00104
00111 00119 00120 00122 00136 00145 00178 00180
00181 00204 00211 00217 00233 00247 00304 00309
00313 00323 00330 00332 00333 00344 00348 00355
00357 00846 00847 00849 00850 00851 00854 00856
00863 00864 00875 00878 00881 00883 00885 00888
00893 00897 00911 00912 00915 00916 00925 00933
00935 00951 00952 00956 00967 00988 01008 01009
01078 01080 01213 01235 01239 01242 01262 01432
01470 01477 01505 01550 01552 01553 01598 01620
01629 01631 01641 01653 01661 01671 01686 01688
01689 01693 01704 01735 01750 01756 01761 01793
01816 01858 01864 01868 01990 02022 02023 02140
ZOOS
00016 00051 00056 00851 00866 00903 00939 00949
01317 01876 01903